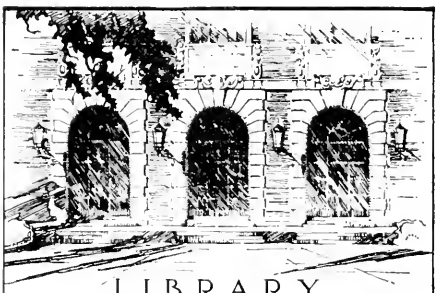

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ILLINOIS STUDIES IN THE SOCIAL SCIENCES

Vol. XXVII No. 4

Published by the University of Illinois
Under the Auspices of the Graduate School
Urbana, Illinois

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SCHOOL CONSOLIDATION AND STATE AID IN ILLINOIS

BY

LEON H. WEAVER

THE UNIVERSITY OF ILLINOIS PRESS
URBANA
1944

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PREFACE

THE PURPOSE of this study is to evaluate the effects of state aid policies on the consolidation of school units in Illinois, and to investigate the means by which and the extent to which these policies can in the future be used to induce school consolidation. The study was presented in 1942 as a thesis for the degree of Doctor of Philosophy in Political Science at the University of Illinois, and an abstract was published at that time. In revising the thesis for publication, it seemed desirable to omit much of the data dealing with exact enrollments, school costs, assessments, and tax rates in specific areas. Only enough of such matter has been retained to illustrate the methods used and to bear out the conclusions.

The chief sources of information in preparing the study have been the statutes and court decisions relating to local finance and state aid, together with statistical data published or made available by the Office of the State Superintendent of Public Instruction and the Illinois Tax Commission. Use was also made of memoranda and releases of the Illinois Education Association and the Illinois Agricultural Association.

The writer wishes to acknowledge his obligation to the school officials and the students of the problem of school reorganization who have given generously of their time in correspondence and interviews. Specific acknowledgment is due to Mr. E. L. Coberly, of the Office of the State Superintendent of Public Instruction, for the many courtesies extended in making available unpublished data; also to Mr. Lester Grimm, Research Director of the Illinois Education Association, and Mr. Allen D. Manvel, Research Director of the Illinois Agricultural Association, for their numerous helpful suggestions and their generosity in making available the results of their own research. The writer thanks his wife, Helen W. Weaver, and Professor Clarence A. Berdahl, of the University of Illinois, who assisted in the preparation of the manuscript for publication. The writer especially wishes to acknowledge with sincere appreciation his indebtedness to Professor Charles M. Kneier, of the University of Illinois, under whose guidance the study was written.

L. H. W.

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Chapter I

INTRODUCTION

There has been an increasing interest in recent years in the problem of reducing the number of school units in Illinois. The degree to which the Illinois school system is a decentralized one, and the degree to which the problem deserves study, can be indicated by the following facts. Illinois has over 12,000 school administrative units—more than any other state.[1] Illinois has more one-teacher schools than any other state. In 1936 it still had 90.2 per cent of the number of one-teacher schools which it had in 1918, as compared with a figure of 66.9 per cent for the country as a whole. In only four states—Montana, North Dakota, South Dakota, and Wisconsin—was the percentage higher.[2]

The purpose of this study is to determine by what means and to what extent state aid policies can be used to encourage and induce the organization of larger and fewer school administrative and attendance units. For this reason, only incidental consideration is given to aspects of state aid policy not related to the question of school consolidation. The same is true of aspects of the larger question of encouraging school consolidation by means other than the use of state aid. Since school consolidation in Illinois is chiefly a down-state problem, this is a study in down-state school administration, devoted primarily to the problem of reorganization of the elementary school system—especially that part represented by the rural one- and two-room schools. The problem of reorganizing the high school system is treated only incidentally.

The study is based on certain underlying assumptions. A grant-in-aid system is usually conceived of as a compromise between unbridled local autonomy and centralized administration. Justification for the establishment and continuance of a grant system would seem to be that it attempts to steer between the defects and dangers, real or supposed, of centralized "bureaucratic" administration and local autonomy. This justification rests on the assumption that there is some advantage in combining actual administration by local people (who presumably have a direct interest in the community where they function) with checks by professional administrators. "Administratively speaking, the aim of the grant-in-aid system is to compel the local authorities to maintain a minimum of efficiency in their services, but not to reduce all localities to the same level. . . ."[3]

[1] *Property Tax Assessments, Levies, Rates, and Extensions: 1939* (Illinois Tax Commission), p. 6. W. S. Deffenbaugh and Timon Covert, *School Administrative Units* (1933), pp. 4-5. William Anderson, *The Units of Government in the United States* (1936), p. 11.

[2] *Are the One-Teacher Schools Passing?* (U. S. Office of Education, Pamphlet No. 92, 1940), pp. 12-14.

[3] Henry J. Bittermann, *State and Federal Grants in Aid* (1938), p. 6.

With respect to the Illinois school situation, most of those who wish to improve the down-state school system work on the assumption that the responsibility of the state government for the equitable and efficient operation of the system should increase rather than decrease. This responsibility, it is assumed, should be discharged in part by an increase in state financial support and control of local authorities which actually administer the function, since, for the immediate future at least, it does not seem to be within the realm of the politically feasible for reform to come about by legislative *fiat* or by entrusting it to a state agency with discretionary powers.[4] Still another assumption is that the system of *ad hoc* school districts will persist for some time to come; and that improvement of the administration of education in Illinois, given the present state of public opinion, will come about through reform of the district system rather than through its complete elimination. Finally, it is generally assumed or argued by those who are leading the school reorganization movement that, if the district system is to persist, Illinois should have fewer and larger school units[5] and that the grant system should be consciously formed to serve this end if possible.[6]

This study is primarily an economic analysis. Statement of this fact indicates the reservations and limitations which must be kept in mind in interpreting the results. Use of state aid to encourage consolidation is an attempt to establish economic incentives for influencing the voting behavior of the local electorate. Such an attempt will be fruitful only to the extent that economic factors are present in the motives which cause people to reorganize their school units and abandon the traditional systems. In other words, this study deals only with the economic factors, which are but part of the total situation. There is not agreement among students of the problem as to the relative importance of economic factors in this complex of motives. One writer, for example, takes the position that, in a three-county Kansas area, socio-psychological factors were much more important than the economic in the failure to reorganize local edu-

[4]For a discussion of the extent to which there can be separability of support and control, see Paul R. Mort and W. C. Reusser, *Public School Finance* (1941), pp. 106 ff., 402. For a discussion of the fate of proposals for a state board of education with certain powers over school reorganization, see Chapter III.

[5]That is, larger political units of school *support;* and in many cases, but not in all, the unit of school *administration* and attendance also.

[6]With respect to the problem of consolidation of districts in Missouri, in some respects analogous with the problem in Illinois, it has been said: *"Reorganization cannot be accomplished by legislation.* It would be folly to try to bring about a reorganization of the school units of Missouri by mandatory legislation. Such a procedure would not be successful.

"A complete reorganization of the school districts of this state can be secured by making the enlarged school units 'financially desirable.' If the state through some additional funds will make it possible for the people in the various communities to have better schools without excessive local taxes the people will voluntarily establish the enlarged school units." Charles A. Lee, "A Suggestive School District Reorganization Program for the State of Missouri," 26 *School and Community* (January, 1940), p. 37.

cational and other governmental units.[7] Other students would argue that economic factors are only *one* of the several important factors influencing the attitudes of local people toward consolidation.[8] It is arguable that merely providing an economic incentive for consolidation, in the form of local tax rate differentials, will be relatively ineffective until education and propaganda have convinced local people, and especially rural people, that larger school units are desirable for their own sake. In answer to this, however, it is also arguable that, if economic incentives are established, the problem of education and propaganda will be simplified, since there will be an added argument for consolidation; and that local action for consolidation is more likely to come about if there is education plus economic incentives than if exclusive reliance is placed on hortatory efforts of officials and civic organizations.

[7]"An analysis of economic factors which can be reduced to facts and figures is essential, but in the consideration of local situations a more significant influence is to be found in socio-psychological factors such as the habits, the attitudes, the customs, and the traditions of the people concerned. . . . County consolidation has been retarded not so much by economic factors as by the fact that such socio-psychological factors as the habits, the attitudes, the customs, and the traditions of the people concerned have not been given serious consideration. These elements constitute not only a large portion of the thinking of these people; they go much further. They largely control and dominate their activities. . . . The existing local educational and governmental units have largely outgrown their usefulness and require reorganization and rehabilitation in the face of modern conditions and demands. . . . This needed change is being retarded not so much by economic forces as concomitant factors which are socio-psychological in nature. . . . These ideological obstructions can be removed through an efficiently organized and administered program of adult education." H. L. Euler, *County Unification in Kansas* (1935), pp. 42, 82, 84.

[8]"Reorganization aid, therefore, is an incentive and a potential economy, as well as a corrective in financing district reorganization. It is an incentive because it assures local districts that they can reorganize without incurring any extra taxation merely because they have reorganized. It removes the element of fear of higher taxes that has so retarded reorganization in the past." Arvid J. Burke, "State Aid for Reorganization," 19 *The Nation's Schools* (April, 1937), p. 36.

Chapter II

SOME PRINCIPLES OF GRANTS-IN-AID

This chapter will be limited to a consideration of general principles of grants-in-aid. A given allocation formula must be evaluated in terms of the purpose or purposes which the grant system is intended to serve. For example, if the purpose of a grant system is conceived to be general distribution of revenues in order to relieve local taxation (on the shared tax principle), allocation on the basis of the amount of the centrally collected tax paid might be defended; but if the purpose of the grant system is conceived to be equalization of local burdens and of the quality and quantity of governmental service, allocation on this basis is clearly inappropriate. If the objective is stimulation of local effort, funds should be apportioned by formulae measuring improvement; while apportionment according to relative need should be the case if the purpose of the grant system is to equalize educational opportunity and tax burdens.[1] Some attention therefore must be given to the nature and purposes of grants in general and of school grants in particular.

Definitions

Since there appears to be some difference of opinion as to what constitutes a grant-in-aid (especially as distinguished from a shared tax), some consideration should be given to the problem of terminology. Some writers distinguish between grants and shared taxes by saying that grants are payments of money from a central treasury to a locality without reference to the origin of the money as the proceeds of a particular tax, while shared taxes are distributed on the basis of the place where the revenue from a specific tax was collected, the state serving merely as a collecting agency.[2] Another basis of distinction sometimes used is the degree of central supervision. Grants may thus be conceived of as payments where the central authority exacts certain conditions of the localities, while shared taxes are received as a matter of right.[3] Still another basis of distinction may be whether or not the payment is for a specified function or object. If the function or object to which the money is to be applied is specified by the central authority, the payment is sometimes called a grant; if there is local discretion, it may be called a shared tax.[4] Grants

[1]Henry J. Bittermann, *State and Federal Grants in Aid* (1938), pp. 430-440.

[2]Lane W. Lancaster, *Government in Rural America* (1937), pp. 136-137, 169. Henry J. Bittermann, *State and Federal Grants in Aid* (1938), pp. 30-40. *Cf.* Catherine G. Ruggles, "State Aid and Shared Taxes in Illinois," 35 *Illinois Law Review* (February, 1941), pp. 754, 757.

[3]Lancaster, *op. cit.*, p. 169. Bittermann holds, however, that the degree of supervision in this respect is not significant. *Op. cit.*, pp. 30-40.

[4]This is the controlling criterion to some writers. *Cf.* Bittermann, *op. cit.*, pp. 30-40. Also compare Lancaster, *op. cit.*, pp. 136-137, 166 ff. This distinction seems to be given little weight by

might be conceived as payments distributed according to need, as distinguished from the origin of the proceeds of a tax. Some conceptions of a shared tax are such, however, that it may also be distributed according to need;[5] and some writers would seem to conceive of grants as in some cases being distributed on bases other than need.[6]

It is apparent from the preceding discussion that the term "grant-in-aid" is variously used, especially as distinguished from shared taxes. Since there is this disagreement as to what constitutes a grant-in-aid, this study will include payments which according to some writers are not grants but shared taxes.[7] Inclusion of such payments may be defended on two grounds: (1) Some writers use a definition of a grant-in-aid that is broad enough to include payments which other writers might call shared taxes. Such a definition is adopted for the purpose of this study: "A grant-in-aid is a sum of money assigned by a superior to an inferior governmental authority. The grant may be outright or it may be conditional, typically the latter."[8] "The grant-in-aid is a subvention payable to a unit of local government from the general funds or special funds of the state in order to help the local unit in the discharge of certain selected functions, or all of its functions."[9] (2) Payments which some writers might consider shared taxes have been so commonly called grants that calling them shared taxes would seem to serve no useful purpose.[10]

Since the study is to center around the relationship of state aid to school unit consolidation, there should perhaps be some statement as to what is meant by "school unit." This can best be done by distinguishing between the two kinds of school units, i.e., *attendance units* and *units of financial support and political control*. The significance of this distinction is that there can be consolidation of attendance areas without consolidation of political units, and vice versa,[11] although there may be a tendency for consolidation of one type of unit to lead to consolidation of the other type. By "consolidation" or "reorganization" is meant the formation of relatively fewer and larger units.

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some writers, however. *Cf.* William H. Stauffer, "State Aid Goals," in *Tax Relations Among Governmental Units* (Tax Policy League, 1937), p. 118, and Ruth G. Hutchinson, *State-Administered Locally-Shared Taxes* (1931), p. 35.

[5]*Cf.* Lancaster, *op. cit.*, p. 167, note, and Bittermann, *op. cit.*, pp. 45, 437.

[6]Harvey Walker, *Public Administration* (1937), pp. 43-44.

[7]As pointed out above, some writers consider the distinction between shared taxes and grants to depend on whether or not the payments to the local government are defrayed from the proceeds of a particular tax or the state's general revenues.

[8]L. D. White, *Introduction to the Study of Public Administration* (1930), p. 155. Professor White goes on to say that grants are typically conditional. Bittermann's definition is essentially similar. *Op. cit.*, p. 5.

[9]R. J. Hinckley, *State Grants in Aid* (New York State Tax Commission, Special Report No. 9, 1935), p. 12.

[10]For example, the distribution of the proceeds of the Illinois two-mill property tax from 1855 to 1873 is treated in the literature on school aids as a grant. Also, in British usage shared taxes are frequently referred to as grants. Bittermann, *op. cit.*, p. 40, note.

[11]For example, one political unit may contain two or more attendance areas, and one attendance area may draw students from several political units, as is the case when several districts transport their pupils to a school in a centrally located district.

Since evaluation of grants must be in terms of the objectives they are intended to serve, these objectives should be stated: equalization, stimulation, and central control. The purpose of equalization grants is to reduce local taxation (or prevent it from rising), to minimize the differential in local tax burdens, and to equalize the quality of governmental service by guaranteeing a minimum program. Stimulation grants are used to induce local communities to provide services that are of more than local interest. Finally, grants are sometimes used as a means of gaining central administrative control and supervision.

Allocation Formulae

Types of formulae. Subsequent parts of this study will deal with an evaluation of allocation formulae, especially as they relate to the problem of school organization and consolidation in Illinois. It is possible that changes in the Illinois distribution formula suggested by evaluation from this standpoint alone might be open to objections on other grounds. It seems desirable, therefore, to consider at this point some of the principal advantages and disadvantages which theoretical analysis and experience show to be inherent in various types of allocation formulae. It should perhaps also be said that whether or not a given quality of a formula will be considered good or bad will depend somewhat on whether the objective in the minds of those who shape the grant system is equalization, stimulation, or central control.

Measures of need. Local need or the extent of the local educational task may be considered as being measured by the total cost of a given program. Total past cost may be determined directly from past performance, or need may be measured indirectly and presumptively for future operation. Various indices have been used for measuring local need presumptively. These are, in general, of two kinds: pupil basis and teacher basis.[12]

Pupil basis. The various forms of the pupil basis are: total population, school population, enrollment, average daily attendance, and total attendance. From the standpoint of the stimulation principle, they are defective in that they do not reward local effort as, for example, would a contribution of a certain percentage of the total budget. Total population is also open to the obvious objection that it measures only very indirectly and inadequately the number of children to be educated. The same criticism applies to school population, although to a lesser extent. That it is nevertheless applicable in some degree is shown by the fact that different proportions of the children included in the age range used for the school

[12]Except where otherwise noted, the following discussion is based chiefly on: E. P. Cubberly, "Apportionment of School Funds," I *Cyclopedia of Education* (Paul Monroe, editor, 1911), pp. 145-147; Henry J. Bittermann, *State and Federal Grants in Aid* (1938), Chap. XVIII; Fletcher H. Swift, *Federal and State School Finance* (1931), Chapters XI-XIV; Paul R. Mort, *State Support for Public Education* (National Survey of School Finance, U. S. Office of Education, 1933), pp. 93 ff.

census may attend school in different parts of the state. For example, a large city would receive credit, on this basis, even for pupils educated privately. Both the school census basis and total population are open to the objection that they provide no incentive to localities to get children into school. Use of the number of pupils enrolled places a premium on getting a child formally enrolled, but still does not give any incentive to require him to attend regularly. Average daily attendance is therefore an improvement in this respect, since it does give such incentive. There may be a tendency, however, for this method to favor wealthy areas where attendance would be regular anyway (another example of the shortcoming of the stimulation principle pointed out above). Total days attendance also places a premium on lengthening the school term. This feature also tends to favor the wealthier areas where the term is usually longer. The above comments concerning average daily attendance and total attendance illustrate the point made earlier in the chapter regarding the incompatibility of the stimulation and equalization principles. The characteristic of these bases just noted (reward for more regular attendance or longer terms) may be considered a merit from the standpoint of the stimulation principle, but a defect from the standpoint of the equalization principle.

All these indices are open to the further objection that they do not relate directly enough to cost, since the ratio of necessary teachers to pupils varies. For example, sparsely populated areas need more teachers proportionately than densely populated areas. Since teachers' salaries are the major part of the cost of education, sparsely populated areas are discriminated against by any form of the pupil basis.[13]

Teacher basis. Use of the teacher basis meets the above objection, but it has its own shortcomings, namely: (1) it fails to provide incentives to regular attendance or to lengthen the term as do average and total attendance respectively;[14] (2) it cannot be assumed that the costs of securing the same quality of teachers will be the same throughout the state (as a result of differences in living costs, for instance);[15] (3) districts may be similarly situated, yet one employ two or three times as many teachers as the other;[16] and (4) it assumes that a relatively large number of teachers in sparsely populated areas is necessary—that the existing number of small schools is justified. Where the central administrative authority does not have the power to pass on this question, the assumption may be contrary to fact and the aid system may thus tend to perpetuate a system of unjustifiably small schools.[17] The teacher basis

[13]On this point *cf.* especially Bittermann, *op. cit.*, pp. 441-442, 459-460, 466.

[14]Cubberly, *op. cit.*

[15]R. H. Hinckley, *State Grants in Aid* (New York State Tax Commission, Special Report No. 9, 1935), pp. 72 ff.

[16]Paul R. Mort, *State Support for Public Education* (National Survey of School Finance, U. S. Office of Education, 1933), pp. 94-95. Thus, there may be an inducement for employment of more teachers than are necessary. "A Proposed New Plan of State Aid Apportionment," 15 *Illinois Teacher* (May, 1927), p. 191.

[17]Bittermann, *op. cit.*, pp. 461-462, 466.

(as compared with pupil bases) favors the districts in which the number of pupils per teacher is small—in general the smaller districts and the sparsely settled areas.[18] Whether or not this is desirable or undesirable will depend on whether or not small schools in these areas are necessary.[19]

Weighted pupil and weighted classroom unit bases.[20] As a basis for distributing aid, attendance alone (either average or total) is unsatisfactory because there may be justifiable and unavoidable differences in per-pupil costs between urban and rural schools, large and small schools, one-room rural schools and consolidated rural schools, and between high schools and elementary schools. The "weighted pupil" or "weighted classroom" unit as a basis for grants meets this objection by giving additional weight to the actual number of pupils in those instances in which the unavoidable cost per pupil in the educational program is high. In large urban elementary schools, increases in size do not decrease the cost per pupil, so in these situations the actual number of pupils is used as the measure of educational need. For other types of schools (such as evening schools and small elementary schools), the actual number of pupils is weighted so as to reflect the proportionate cost per pupil, the cost in the large school serving as the standard.[21] The standard is a pupil taught in the type of community and in a school of such a size that it is within a range (in size) in which the per-pupil cost of providing a uniform program remains practically unaffected by any decrease or increase in average daily attendance.[22] Thus, Mort defined a weighted pupil for the state of New York in 1924-25 as a pupil receiving his schooling in an elementary school of more than 142 pupils in a village or city in New York.[23] The weighted classroom unit adjusts for cost differentials resulting from variations in class size.[24] Where there are fewer teachers in a school district than one would expect on the basis of the general state average for districts with the same number of pupils, the state aid would be determined upon the basis of the number of teachers which the district would have if it conformed to the average. If a district has more teachers than the average, a compensating adjustment would be made.[25]

The weighted pupil index and the weighted classroom index are treated together here because they are really not two different measures

[18]Bittermann, *op. cit.*, p. 460.

[19]For a discussion of less important bases other than pupils and teachers (district, school, classroom units, etc.), see Swift, *op. cit.*, pp. 236 ff.

[20]This treatment is based on Swift, *op. cit.*, pp. 293-295; Hinckley, *op. cit.*, pp. 72 ff.; *Report of the* [New York] *Special Joint Committee on Taxation and Retrenchment* (Legislative Document No. 97, 1925), pp. 35-36; Paul R. Mort, "State Aid for the Public Schools in the State of New York," in *ibid.*, pp. 197 ff.

[21]Hinckley, *op. cit.*, p. 73.

[22]Swift, *op. cit.*, p. 294.

[23]Mort, *op. cit.*, pp. 197-198.

[24]Hinckley, *op. cit.*, pp. 73-74.

[25]*Report of the* [New York] *Special Joint Committee on Taxation and Retrenchment* (1925), p. 36. For the statistical analyses underlying the weighted pupil basis, see Paul R. Mort, *The Measurement of Educational Need* (Teachers College, Columbia University, 1924).

but are merely two different expressions of the same thing: the average pupil-teacher ratio for schools of a given size. The weighted classroom unit is merely a multiple of the weighted pupil unit, and the weighted pupil measure is merely a fraction of the weighted classroom.[26] One measure may be changed into the other by the simple process of multiplication or division by the average number of pupils per teacher in schools of the size of the specific school concerned. This may be explained if the procedure for deriving the measures is considered in terms of an example using specific figures.

The starting point for the derivation of these measures is the construction of a graph showing the relationship between the number of pupils in average daily attendance and the number of classroom units into which they are divided in actual practice in the United States.[27] From such a graph it could be concluded in 1933:

> The average number of teachers in an elementary school with an average daily attendance of 5 is 1.00; with an average daily attendance of 10, 1.00; with an average daily attendance of 15, 1.01; and so on up to an average daily attendance of 295, when the average number of teachers is 9.66.[28]

If a line is drawn through these and similar points, a formula can be derived which represents actual practice in determining pupil-teacher ratios. The formula derived from the above-mentioned graph in 1933 was stated as follows:

> In any elementary school which employs only one teacher allow *one* classroom unit regardless of the number of pupils in average daily attendance. In any elementary school which employs two or more teachers allow *one* classroom unit for any average attendance up to and including 21. If the school has more than 21 units of average daily attendance, but not more than 42, allow one classroom unit for the first 21 pupils and 1/21 classroom unit for each additional pupil. If the school has more than 42 pupils in average daily attendance, but not more than 290, allow two classroom units for the first 42 pupils in average daily attendance and 1/31 additional classroom unit for each additional pupil. If the school has an average daily attendance of more than 290, count 1/29 classroom unit for each pupil in average daily attendance.[29]

The above figures are derived from actual practice, where the average elementary pupil-teacher ratio is 21 to one (or less) in one- and two-teacher schools, 31 to one in schools enrolling between 42 and 290 attendance pupils, and 29 to one in the larger schools. Similar procedures are followed for high schools.

The above formula, expressed in terms of classroom units, may also be stated in terms of weighted pupils:

> In any elementary school which employs only one teacher, allow 29 weighted pupils, regardless of the number of pupils in average daily attendance. In any elementary school which employs two or more teachers, allow 29 weighted pupils for any average daily attendance up to 21. If the school has more than 21 units

[26]Paul R. Mort, *State Support for Public Education*, pp. 119, 127.
[27]For such a graph based on 1933 conditions, see Mort, *op. cit.*, p. 121.
[28]*Ibid.*, p. 120.
[29]*Ibid.*, pp. 120-121.

of average daily attendance but not more than 42, allow 29 weighted pupils for the first 21 pupils and 1.38 weighted pupils for each additional pupil in average daily attendance. If the school has more than 42 pupils in average daily attendance, but not more than 290, allow 58 weighted pupils for the first 42 pupils in average daily attendance and .935 weighted pupils for each additional pupil in average daily attendance. If the school has an average daily attendance of more than 290, count one weighted pupil for each pupil in average daily attendance.[30]

Thus, the weighting for each pupil in schools of 42 or less is 1.38. From that point on the weighting decreases gradually up to an attendance of 290. The weightings for schools of 100, 200, 250, and 290 are 1.12, 1.06, 1.03, 1.01, and 1.00 respectively, and for all attendances above 290 the weighting is 1.00.[31]

The weighted pupil or weighted classroom measure is thus a modified average daily attendance figure which treats similarly situated districts exactly alike (thus remedying a shortcoming of the teacher basis as noted above) and takes into consideration differences in per-pupil costs involved in providing a given program in sparsely settled areas and in densely settled areas, thus meeting an objection to the simple pupil basis.[32] From the standpoint of equity in measuring educational need, these measures are usually considered to be superior to any of the others which have been discussed above.[33]

The weighted pupil and weighted classroom indices have been described in detail in order to provide a basis for the evaluation of their effect on the incentive to consolidate. From the foregoing analysis it can be seen that small one-teacher and two-teacher schools are given especially favorable treatment, as compared to the treatment which they would receive if aid were apportioned on an attendance basis. There is apparently an assumption that actual practice in maintaining this type of school means that their maintenance and continuance is on the whole justified and necessary.[34]

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[30]Mort, *op. cit.*, p. 122. Twenty-nine is the standard because that is the average number of pupils per teacher in large schools, where increases in the number of pupils does not decrease unit costs. Figures for weighted pupils are derived as follows: $29 \div 21 = 1.38$; $29 \div 31 = .935$.

[31]Mort, *op. cit.*, p. 123. An example will show how these weightings are derived. It can be worked out in two ways. (1) Examination of the graph (*ibid.*, p. 121) showing the pupil-teacher ratio shows that, on the average, schools of 100 pupils have 3.9 teachers: $100 \div 3.9 = 25.6$ (the average number of pupils per teacher); $29 \div 25.6 = 1.12$. (2) Assign 58 weighted pupils for the first 42 pupils, and .935 for each of the rest (58): $58 \times .935 = 54.3$; $58 + 54.3 = 112.3$; $112.3 \div 100 = 1.12$.

[32]Mort, *op. cit.*, p. 95.

[33]*Ibid.*, pp. 98, 105. The suggestion has been made that the weighted pupil plan might be adopted in Illinois to meet the objection that the basic program is not clearly defined, and that schools similarly situated may employ different numbers of teachers. L. R. Grimm, *The Illinois Plan of State Aid for Common Schools* (Research Department, Illinois State Teachers' Association, 1934), p. 11. This objection has lost some of its force since the adoption, in 1939, of a provision restricting the $1,048 minimum to "each school building not in excess of two." *Ill. Rev. Stat.* 1939, c. 122, sec. 23434. A bill (H. B. 748) was introduced in the 1935 legislature embodying the weighted classroom measure. The Committee on Education recommended its passage, but it was tabled after first reading. *Legislative Synopsis and Digest,* Fifty-ninth General Assembly (1935), No. 22, p. 435.

[34]"Since there are no valid experimental data determining the proper class size in each type of school, the best remaining criterion, when all factors are taken into consideration, is the judgment of persons charged with the maintenance and operation of schools. This judgment is crystallized, in a way, in the average practice of the country." Eugene S. Lawler, "Technical Aspects of the Development of the National Pupil-Teacher Index" (Supplement III in Paul R. Mort, *State Support for Public Education*), p. 426.

At this point it will suffice merely to raise a question as to the validity of this assumption.[35]

Additional refinements for measuring educational need. The weighted pupil and weighted classroom indices are designed to measure the need for the basic instructional program by taking into account variations in class size. They ignore, however, differences in current expenditures other than teachers' salaries (such as transportation costs), differences in the cost of living, and differences in the need for capital outlay. Additional refinements for measuring educational need have been devised to take these factors into account, but there seems to be no necessity for discussing them in detail at this point.[36]

Measurement of ability and effort: equalization. From the standpoint of equalizing opportunity and tax burdens, measuring need is but one aspect of the problem. "Educational need is purely a measure of education to be offered. It should not be confused with ability to support education. It is only one of the elements which go into the measure of ability to support education."[37] Ability has accordingly been defined as the "ratio of local taxable resources to the cost of the minimum offering"[38] of education. Although income, or indices based in part on income,[39] would be a more nearly ideal measure of economic resources, property values must be used as rough and presumptive measures due to reliance on the property tax and due to the difficulty of determining the income of areas as small as school units.[40] Stating these concepts of need and ability, then, makes it possible to say that an equalization grant is one distributed on the basis of *relative lack of ability,* as defined above.

Allocation formulae and the problem of school organization and consolidation. Allocation formulae may have a considerable effect on the incentive to reorganize and consolidate school districts.[41] They may operate to encourage or discourage it. For example, strict adherence to the attendance basis would discourage consolidation less than the teacher basis,

[35]It should perhaps be pointed out that the questionableness of this assumption in respect to some classes of schools is evidently appreciated. "The relationship between size of school and class size embodied in the national index is, after all, based upon actual practice. The validity of the indices is based upon the assumption that the experience in groups of one size has been as reliable a guide to proper class size as the experience in schools of any other size. Actually, of course, it may be possible eventually to develop standards for schools of different sizes which will be based on fundamental analysis rather than on actual practice." Mort, *op. cit.,* p. 128. The bill introduced in the Illinois legislature in 1935 (H. B. 748) contained a provision which would, after June, 1939, gradually diminish the aid which might be claimed by small one-room schools. It has been suggested that one way of minimizing the danger that such an index of need will perpetuate small schools would be to equalize on a higher rate in the rural districts than is required of other districts, as was done in New York when the state aid law was made applicable to one-teacher districts. (Letter from Paul R. Mort, dated August 14, 1941).

[36]*Cf.* Mort, *op. cit.,* pp. 95 ff., and literature cited.

[37]Mort, *The Measurement of Educational Need,* p. 1.

[38]Hinckley, *op. cit.,* p. 75.

[39]For some suggested indices of this nature see Hinckley, *op. cit.,* p. 75.

[40]Bittermann, *op. cit.,* p. 467.

[41]For an analysis of the effects of allocation formulae on the incentive to consolidate see *Local School Unit Organization in 10 States* (U. S. Office of Education, Bulletin No. 10, 1938).

since the teacher basis, as compared with the attendance basis, favors the small schools in sparsely populated areas, on the assumption that a relatively high ratio of teachers to pupils is necessary and unavoidable. "In so far as the one-teacher school is unavoidable the grant on the teacher basis is the most appropriate";[42] but where this assumption is contrary to fact, the result is merely state subsidization of schools that might not be maintained if the entire cost had to be borne locally.

The Illinois 18-pupil "pegging" provision for calculation of flat grants, in effect until 1939, was a form of the teacher basis, as is the present $1,048 minimum for the calculation of equalization aid. It has been suggested that these bases have been positive discouragements to consolidation.[43] Evaluation of this suggestion will be one of the problems of this study.

Summary

It is assumed that consolidation, both of attendance areas and of the units of support and control, by legislative *fiat* or by mandates of central officials is not within the realm of the politically feasible within the foreseeable future. Therefore, it is assumed that state aid legislation should be consciously formed to serve the end of consolidation if possible. Grants may be conceived as having three principal purposes or objectives: to equalize educational opportunity and local tax burdens; to provide an instrument of central administrative control; and to serve as a reward for local effort in order to stimulate action in a given direction. State aid policies intended to induce consolidation might be conceived as coming within either of the latter two categories. For instance, if grants were made conditional upon a district's having a certain area and enrollment, the grants could be conceived as primarily instruments of central control. If grants were extended more generously to large districts than to small districts, they could be regarded as grants intended to stimulate action in a given direction or to reward local action. Stimulation grants have the disadvantage of being to some extent incompatible with the equalization philosophy. In general, any allocation formula in which the teacher basis predominates may be expected to intrench rural schools more than formulae in which the pupil basis predominates, due to the low pupil-teacher ratios in rural schools.

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[42] Bittermann, *op. cit.*, p. 462.

[43] O. F. Weber, *The Problem of School Organization and Finance in Illinois* (1938), p. 20. *Some Aspects of School Administration in Illinois* (Research Department, Illinois Legislative Council, 1938), pp. 40, 51. I. M. Labovitz, "Education," in S. E. Leland, editor, *State-Local Fiscal Relations in Illinois* (1941), p. 102. Also, *cf.* "Determining the Purpose of a State Distributive Fund," 15 *Illinois Teacher* (January, 1927), p. 81, and "Resolutions," *Illinois Agricultural Association Record* (February, 1941), p. 33.

Chapter III

THE PRESENT STATE AID SYSTEM AND ITS EVOLUTION

The Present Law

The more important features of the present Illinois system of state aid for schools may be summarized as follows: After certain sums are apportioned as special purpose grants,[1] the remainder of the money in the school fund is then assigned to the counties for the benefit of the school districts. In case the money available for this purpose is greater or less than the amount required, the apportionment to each county is proportionately increased or reduced. Elementary school districts receive a general apportionment of $11 for each pupil in average daily attendance (other than pupils whose tuition is paid from the state treasury as outlined above). In addition to the general apportionment based on average daily attendance, equalization quotas are granted to elementary districts with an educational rate of at least one per cent of its equalized assessed valuation in such sums as will be sufficient to supplement the one per cent rate and the general apportionment by an amount which will produce the larger sum under the following computations: (1) the sum of $56 per elementary school pupil in average daily attendance; (2) the sum of $1,048 per school building not in excess of two[2] which it may be necessary to operate; or (3) in districts with a three-year average ADA[3] of at least 25 resident pupils, $1,048 per full-time elementary teacher, not in excess of two.[4] However, after July 1, 1943, schools having less than 7 ADA pupils for two consecutive years would not be eligible to receive state aid —either the general apportionment or the equalization grant, unless geographic conditions required their maintenance, or it was found that they would attain a resident enrollment of eight or a total enrollment of ten in the succeeding year. Elementary districts which educate their children in other districts by paying their tuition and transportation expenses and which levy a one per cent tax, if the tax and general grant are not sufficient to pay the tuition and transportation costs, are entitled to an equalization grant to supplement the local tax and general grant sufficiently to

[1]For example, for compensation and expenses of county superintendents and tuition of children from homes for orphans. *Ill. Rev. Stat.* 1941, c. 122, sec. 234¾ (a)-(d).

[2]Prior to 1930, the corresponding provision was $1,048 per *teacher*, which had a tendency to encourage some districts to hire more teachers than were needed. *Ill. Rev. Stat.* 1935, c. 122, sec. 335 (e). *Ill. Rev. Stat.* 1939, c. 122, sec. 234¾ (e).

[3]Average daily attendance.

[4]This provision was inserted in 1941 in order that the preceding clause would not work a hardship on districts needing two teachers but having only one building. Compare *Ill. Rev. Stat.* 1939, c. 122, sec. 234¾ (e) and *Ill. Rev. Stat.* 1941, c. 122, sec. 234¾ (e).

pay the tuition and transportation costs, up to $100 per pupil.[5] Overlying high school districts and non-high school districts which levy an educational rate of three-fourths of one per cent or more are entitled to equalization quotas sufficient to supplement the proceeds of the above rate by an amount that will make available the sum of $80 per high school pupil in average daily attendance. "Unit" systems—districts maintaining twelve grades—receive the flat grant of $11 for each elementary pupil in average daily attendance, and qualify for equalization quotas on the basis of an educational rate of one and one-half per cent. The equalization levels in "unit" districts are $56 per elementary pupil in average daily attendance and $80 per high school attendance pupil. Provision is made for assuring that equalization quotas shall be used for educational purposes and not be used to increase cash balances by requiring the submission of budgets by equalization districts at the time that the aid is claimed. In the case of districts receiving equalization quotas and governed by a board of directors, the current expenditures must be approved in advance by the county superintendent of schools. Also, any district which fails to maintain a recognized school, or to provide educational facilities for its pupils in a recognized school, shall not be granted its equalization quota for that year. The standards for recognition are to be laid down by the Superintendent of Public Instruction.[6]

Historical Considerations

An understanding of the present Illinois state aid system is facilitated by an appreciation of how the system has evolved. Since all historical treatment must necessarily be somewhat selective, the following discussion will relate chiefly to those features of the state aid system which are of most significance for a study centering around the relation between the state aid system and school organization. Therefore, attention will be devoted chiefly to trends in the amounts of state aid, changes in the method of distribution, and the effect of these changes. Other state aid issues will be treated only incidentally.

The state common school fund. The common school fund consists partially of $57,000 per year, appropriated to the fund out of the general revenues of the state as interest on an earlier school fund—the permanent school fund—which the state "borrowed" for general state purposes and never repaid. In addition to these appropriations, which may be re-

[5]This legislation was enacted in the 1941 session. *Laws of Illinois,* 1941, pp. 1123, 1130, 1131.

[6]*Ill. Rev. Stat.* 1941, c. 122, sec. 234¾ (e). This study relates chiefly to that part of the common school fund claimed by down-state districts as general apportionments and as equalization quotas. These claims accounted for approximately 65 per cent of the fund for the fiscal year ending June 30, 1941, and were estimated to account for approximately 63 per cent for the 1941-42 fiscal year. *The Common School Fund* (mimeographed release, Illinois Education Association). *Cf. Annual Report of the Auditor of Public Accounts,* 1940, pp. 190 ff.

garded as interest payments, the state also makes appropriations to the state common school fund from current revenues that come into the treasury from various sources. The second of these appropriations has been much the larger in recent times (over 99 per cent of the total appropriation for the 1942 fiscal year). Appropriations to the state common school fund have increased from $1,000,000 in 1910 to $16,300,000 in 1942.[7]

Perhaps a more adequate conception of the degree to which the state supports the common schools can be gained from comparing the amount of state aid with the total district net educational expenditures. From such a comparison it is seen that, while there have been years in which the percentage of local educational expenditures borne by the state has been less than the percentage for the preceding year, on the whole the trend has been upward. Since 1934 state support has varied between approximately one-tenth and one-seventh of local district net educational expenditures.[8] These figures do not take into account local expenditure for building purposes and debt retirement. On the basis of total expenditure, the percentages would be smaller. For example, in 1937-38, of the total revenue of the elementary and secondary schools in Illinois, the state provided 8.28 per cent, the local district 91.27 per cent, and the federal government .45 per cent. In 1938, Illinois ranked seventh in expenditures per pupil enrolled, but only forty-first with respect to the percentage of school revenue derived from the state.[9]

Increased state aid and reorganization. The attitude of the administration during Governor Horner's two terms was that considerable increases in state school aid were of questionable wisdom until reorganization was effected, on the ground that increasing the grants without requiring reorganization might merely serve to perpetuate the existing system. Governor Horner favored the creation of a state board with powers adequate to accomplish reorganization and to devise a system of state aid that would contribute to this end before increasing the amount of state aid.[10] The

[7]See L. R. Grimm, *Building the State Common School Fund in Illinois* (Illinois Education Association, 1940), and *Biennial Report of the Auditor of Public Accounts* for the various years.

[8]These fractions were obtained by comparing the data in Statement No. 2 of the *Biennial Report of the Auditor of Public Accounts* with the net educational expenditures by the districts given in the *Statistical Report of the Superintendent of Public Instruction* for the various years.

[9]*School Costs and State Expenditures, 1930-1939* (National Education Association, 1941), pp. 144 ff.

[10]*Veto Messages of Henry Horner, Governor of Illinois,* 1937, p. 42. *State Aid to Schools in Illinois* (Department of Finance), Ch. V, *passim.* Henry Horner, "Report on Educational Problems in Illinois" (speech delivered to the Illinois Education Association and the Illinois County Superintendent's Association, 1938), *passim,* and especially pp. 9-13. Although opposing compulsory consolidation, the Illinois Agricultural Association has taken the position that "further increase of state aid to schools under existing conditions would raise additional obstacles to desirable changes," and hence increase in state aid should wait on "essential improvement in school district organization." "Resolutions," 19 *Illinois Agricultural Association Record* (February, 1941), p. 33.

Illinois Education Association (or at least some of its leadership) questioned the argument that increases in state aid necessarily intrenched the present system, arguing that the experience of other states disproves this.[11]

Allocation formulae. Until 1923 the method of distributing state aid for common schools was chiefly based on school population. The free school law of 1825 provided that the distribution of state funds to counties should be according to the number of white children under 21.[12] The 1835 law provided that allocation to counties should be proportional to the number of white children under 20.[13] The law of 1855 levying a two-mill tax provided that two-thirds of the state subsidy should be distributed to the counties in proportion to the number of white children under 21 and one-third of the sum should be distributed in proportion to the number of townships and parts of townships in each county.[14] The law of 1872 provided that the entire amount of the state aid be apportioned to counties in proportion to the number of children under 21.[15] This method of allocation remained in effect until 1923.[16]

The law of 1923 provided that, before payments to individual counties and districts were made, there should be set aside from the school fund certain amounts for the following purposes: teacher pension and retirement fund; payments in lieu of taxes to certain districts; and compensation of county superintendents.[17] The balance of the fund was to be apportioned according to a rather complicated formula which evidenced an attempt to employ more exact measures of educational need than the school census basis, namely the teacher-school-day and the pupil-day of

[11]"The experience of other states indicates that increased state aid promotes reorganization and efficiency. The common school fund appropriation in Illinois has been increased only 30 per cent in the last six years as compared with 78 per cent for all the states." R. C. Moore, "Veto Message Erroneous But Revealing," 25 *Illinois Teacher* (June, 1937), p. 326. " . . . the poor little districts ought to be legislated out of existence rather than starved out . . . liberal state aid in other states does not prevent consolidation if other legislation is enacted to encourage it. . . . A large state school fund does not prevent consolidation; in fact, it may encourage consolidation by being used in part as aid to high schools and to pay in whole or in part for the transportation of pupils in consolidated districts." R. C. Moore, "State Aid and Consolidation," 24 *Illinois Teacher* (June, 1936), p. 323.

[12]*Laws of Illinois,* 1825, pp. 121 ff., sec. 15.

[13]*Laws of Illinois,* 1835, pp. 22 ff., 25.

[14]*Laws of Illinois,* 1855, pp. 77-78. From 1865 to 1872 the method of allocation *within* the county was as follows: The county superintendent apportioned one-third of the county's share of the state aid to townships in proportion to the number of acres in each township and the remaining two-thirds to the townships in proportion to the number of white children under 21. The township trustees then distributed the township's share to the districts, one-half in proportion to the number of children and the other half in proportion to attendance. *Public Laws of Illinois,* 1865, pp. 113, 117.

[15]*Public Laws of Illinois,* 1871-72, pp. 732 ff. The omission of the stipulation that the children to be taken into account be *white* children was in conformity with the mandate in the constitution of 1870 that the General Assembly provide "all children of this state" with a good common school education. *Constitution,* Art. VIII, sec. 1. Allocation to individual districts by township trustees was also to be proportioned to the number of children under 21. *Public Laws of Illinois,* 1871-72, p. 712.

[16]The law of 1909 merely re-enacted the school census basis as contained in the law of 1872. *Laws of Illinois,* 1909, p. 400, sec. 211.

[17]*Laws of Illinois,* 1923, p. 578. These provisions were thus forerunners of the similar provisions of the present law.

attendance. The plan also embodied features designed to stimulate local districts to lengthen the term, employ well trained teachers, and require regular attendance. The equalization philosophy was evidenced by provisions for special aid to weak districts. Five major allotments (restricted to elementary schools) were provided by this law:

(1) Seventy cents for each teacher-school-day.

(2) For each week, not exceeding 36 weeks, $2.50 per teacher if the teacher was a normal school graduate or the equivalent; $1.00 per teacher who possessed 36 weeks of normal school training or the equivalent; $0.50 per teacher who possessed 18 weeks of normal school training or the equivalent.

(3) One and one-half cents per pupil-day of attendance.

(4) Special aid to weak districts levying the maximum rate allowed by law without referendum—a per-teacher-school-day allowance graduated according to assessed valuation: $25,000 or less, $2.00; $25,000 to $30,000, $1.50; $30,000 to $35,000, $1.00; $35,000 to $40,000, $0.50.

(5) An additional $100 to each one-room elementary school district employing a normal school graduate and operating school nine months.[18]

In 1927 the method of distribution was again modified.[19] The principle of rewarding effort was virtually abandoned and the equalization principle given greater prominence. This change was due in large part to dissatisfaction with the failure of the mode of allocation under the 1923 law to send the money where there was the greatest need and to its tendency to send money where there was already great ability. This was caused by the stimulation features of the law. For example, the able districts which could hire well trained teachers anyway qualified for grants on the basis of this fact.[20] This law offers an illustration of the incompatibility of the stimulation and equalization principles, or at least the difficulty of combining them, pointed out in the preceding chapter.

The 1927 law embodied two main features which remain in the present law: (1) a general apportionment per elementary pupil in average daily attendance (sometimes referred to as "flat grants") and (2) "equalization quotas" on a per-pupil or per-teacher basis, whichever was the larger. The specific provisions may be summarized as follows:

[18] *Laws of Illinois*, 1923, pp. 580-581. Summary is adapted from that of Weber, *op. cit.*, p. 51.

[19] The following descriptions of the changes made in the allocation formulae in 1927, 1935, and 1939 apply to that part of the school fund remaining after amounts are deducted for teachers' pension, payments in lieu of taxes, county superintendents' salaries, etc. The 1927 equalization law was also re-enacted in 1928, since the 1923 (reward-for-effort) law was also re-enacted in the 1927 session in a statute approved subsequent to the approval of the equalization law. Thus, the equalization law really did not go into effect until 1928. Since it is usually referred to in the literature as the 1927 law, it is so referred to here. *Laws of Illinois*, 1927, pp. 794, 829. *Laws*, 1928, First, Second, and Third Special Session, p. 71. *Ill. Rev. Stat.* 1927, c. 122, sec. 234 (e). Weber, *op. cit.*, p. 51.

[20] See p. 26, below. Also see H. A. Perrin, *The Administration of the State Distributive Fund in Illinois* (1932), *passim*, and especially pp. 14-15, 30 ff.; "The New Plan of State Fund Apportionment," 17 *Illinois Teacher* (January, 1929), p. 132; "Equalizing Educational Opportunities: the Primary Purpose of the State School Fund," 15 *Illinois Teacher* (September, 1926), pp. 4, 5. "Determining the Purpose of a State Distributive Fund," 15 *ibid.* (January, 1927), p. 79, *passim*. "A Proposed New Plan of State Aid Apportionment," 15 *ibid.* (May, 1927), p. 184, *passim*. "State Aid Apportionment to Large City School Districts," 14 *ibid.* (April, 1926), p. 145. "State Aid Claims Made by Various Types of Districts," 14 *ibid.* (May, 1926), p. 164.

(1) Nine dollars per pupil in average daily attendance, schools having less than 18 pupils in average daily attendance to receive credit for 18.[21]

(2) Special equalization aid to needy districts. Amount of such aid was the difference between the proceeds of a levy of the maximum allowed by law (without referendum)[22] and whichever was the larger of the following: (a) an amount equal to $25 per pupil in average daily attendance; (b) an amount equal to $850 per teacher.[23]

Comparison of the three allocation formulae used between 1920 and 1928.[24] The 1923 law did not go into effect immediately upon its passage, because of the time consumed in preparing forms and securing the necessary data. The distribution for the school year ending in 1924 was therefore made on the school population basis embodied in the 1872 law. The formula provided in the 1923 law was used in the distributions for the school years ending in 1925, 1926, and 1927, the 1927 law becoming operative for the distribution for the school year ending in 1928.[25]

Since approximately the same amounts of money were distributed in 1924, 1927, and 1928, analysis of the distributions for these years shows the effect of the three formulae on the amount of money received by different parts of the state. Perrin divided the counties of Illinois into four groups, classified according to assessed value per pupil in average daily attendance in 1927-28.[26] Comparison of the amounts received by these four groups of counties indicates how each group fared under the three methods of apportionment.

After eliminating Cook county from the comparisons, it was found that the two wealthiest groups of counties received substantially more under the 1923 stimulation basis (as shown by 1927 data) than under the school census basis (as shown by 1924 data). These groups received less under the 1927 equalization basis (as shown by 1928 data) than under the stimulation basis. The amount received in 1928 was also smaller than the amount received in 1924. The third group of counties was affected but slightly by the changes in the method of allocation. The fourth group—the least able to support education—received substantially larger amounts under each succeeding plan. The 1927 equalization law also

[21]As originally introduced, this 18-pupil "pegging" provision would not apply to districts with less than five pupils in average daily attendance or to districts with less than five attendance pupils per teacher. Such schools apparently were not intended to be excluded from equalization quotas, however. "Any district in which the actual number of pupils in average daily attendance during the year . . . averages not less than five and yet less than eighteen per . . . teacher, shall be allotted eighteen pupils in average daily attendance. . . . " "Any district in which the actual average daily attendance . . . is less than five . . . shall not be entitled to apportionments." S. B. 253, 55th General Assembly, 1927.

[22]This maximum is now one per cent. From 1932 to 1935 it was the average rate for the years 1929-32. *Cf.* I. M. Labovitz, "Education," in S. E. Leland, editor, *State-Local Fiscal Relations in Illinois* (1941), pp. 72-74.

[23]*Laws of Illinois*, 1927, pp. 797, 798. *Laws of Illinois*, First, Second, and Third Special Session, 55th General Assembly, 1928, pp. 71 ff. Summary is adapted from Weber, *op. cit.*, pp. 51-52.

[24]This treatment is based on H. A. Perrin, *The Administration of the State Distributive Fund in Illinois* (1932), Chapters IV and V.

[25]*Ibid.*, p. 39.

[26]*Ibid.*, pp. 35 ff.

tended to treat rural sections and small villages more favorably than the 1923 law.[27]

Amendments of 1935, 1939, 1941. In 1935 amendments were adopted raising the general apportionment per pupil to $11, and the special aid was increased to an amount which, with the computed yield of the one per cent tax rate, would provide at least $30 a pupil or $850 per teacher, whichever was the larger.[28] A provision was also inserted to limit the amount of the special equalization quota to the difference between budgeted educational expenditures for grades one through eight and the amount of the computed tax yield. This provision was designed to discourage the practice of some districts of levying a high enough rate to qualify for aid in one year and levying a very low or no rate the next year, thus running the school for the second year on the accumulated surplus.[29]

Perhaps the most significant change in the method of apportioning the common school fund made in recent years was the amendment adopted in 1939 providing for elimination of the 18-pupil "pegging" clause in the distribution of the $11 general apportionment. This amendment went into effect with the distribution based on the claims made for the school year ending June 30, 1939.[30] The equalization level was increased and the method

[27]*Ibid.*, p. 134.

[28]In 1934 provision was made for distribution of part of the motor fuel tax revenue paid into the school fund as flat grants to high schools. *Laws of Illinois*, First, Second, and Third Special Sessions, 1933-34, p. 254. These flat grants were repealed the next year. *Laws of Illinois*, 1935, p. 1379. Since 1935 there have been proposals to increase the flat grants to elementary schools and to provide for flat grants to high schools, but they have not been enacted. The Horner administration consistently opposed them, on the ground that they cause the state's money to go to able areas as well as to needy areas and that a given amount of state money will more effectively serve the cause of equalizing educational opportunity if it is distributed as equalization aid rather than as flat grants. *Cf. State Aid to Schools in Illinois* (Department of Finance), pp. 20 ff. Legislation for flat grants has been supported by the Illinois Association of School Boards (*Illinois School Board Bulletin*, March-April, 1939, p. 1) and by the Illinois Education Association. For some of the latter organization's arguments, see L. R. Grimm, "New Plan of State Aid Proposed," 23 *Illinois Teacher* (May, 1935), pp. 287, 306; B. F. Shafer, "Our State Support Program," *ibid.* (March, 1939), p. 199; "Equalizing to Higher Levels," 19 *ibid.* (November, 1930), p. 85; "A Proposed New Plan of State Aid Apportionment," 15 *ibid.* (May, 1927), p. 187; *Flat Grants for Common Schools* (Illinois Educational Association, 1941).

[29]*Laws of Illinois*, 1935, p. 1379. Also *cf. Some Aspects of School Administration in Illinois* (Research Department, Illinois Legislative Council, 1938), pp. 69-71. Provisions were also inserted clarifying the procedure for making of claims by schools attended by tuition pupils and by unit systems. *Laws*, 1935, pp. 1382-1383.

[30]*Cf. Laws of Illinois*, 1939, pp. 1063-64, 1068, 1069, 1071. The "18 pegging" provision has been criticized as intrenching small rural schools and discouraging consolidation. *Cf.* Chapter II. It was evidently included in the 1927 law on the assumption that use of the straight per-pupil basis would work a hardship on schools in sparsely settled rural areas where pupil-teacher ratios were low and the assumption that pupil-teacher ratios in such areas were necessary and justified. The 1927 law containing this feature was warmly supported by the Illinois State Teacher's Association. *Cf.* "The New Plan of State Fund Apportionment," 17 *Illinois Teacher* (January, 1929), p. 132. As originally drafted by this organization, however, the "18 pegging" provision would not have applied to schools with less than five attendance pupils. *Cf.* S. B. 253, 55th General Assembly, 1927. This organization did not oppose elimination of the "18 pegging" provision in 1939, evidently on the ground that the poorer one-room districts would be allowed to gain in equalization aid what they would lose in flat grants. B. F. Shafer, "What About Legislation?" 27 *Illinois Teacher* (February, 1939), pp. 162, 163. It is interesting to note in this connection that the Illinois Agricultural Association, which might conceivably have been favorable to a provision favoring the rural areas as this one did, not only went on record as favoring the elimination of this provision but also stated that "this provision, when enacted, was neither proposed nor supported by our association." "Resolutions" 16 *Illinois Agricultural Record* (February, 1939), p. 16. This organization has, however, consistently opposed compulsory consolidation and

of computing equalization aid changed. Before this change, the state made up the difference between the yield of the qualifying rate and $30 per pupil in average daily attendance or $850 per teacher, whichever was the larger. The 1939 amendments provided that the state should supplement the yield of the qualifying rate *and the flat grants* by a sum sufficient to make available to the school $51 per elementary pupil in average daily attendance, or $1,048 per teacher, whichever is the larger.[31] The effect, if not the intent, of this provision will be to enable small schools claiming equalization aid to gain back in equalization aid what they lose in flat grants due to elimination of the 18-pupil "pegging" provision.

Other changes made in 1939 in the method of distributing the common school fund were: insertion of a clause stating that the $1,048 minimum for computing equalization quotas should apply only "to each school building not in excess of two which it may be necessary to operate and maintain";[32] inclusion of a provision requiring that current expenditures made in a district receiving equalization aid and governed by a board of directors be approved in advance by the county superintendent; addition of a clause stating that after July 1, 1941, no equalization aid should be given to schools failing to maintain recognized schools or to provide educational facilities for its pupils in a recognized school; insertion of a provision for equalization aid up to $80 per high school pupil in average daily attendance; elaboration and strengthening of the provisions for assuring that equalization aid be used only for educational purposes as shown on budgets submitted;[33] and inclusion of changes designed to make the year on which apportionments are based start with July instead of January.[34]

In addition to the above amendments relating to the method of distribution of the common school fund, the 1939 legislature also initiated a policy of state aid for transportation. This legislation provided that the state reimburse districts for three-fourths of the cost of transportation, with a maximum of $15 per pupil transported. The sum of $500,000 was appropriated for the first biennium for this purpose.[35]

As has already been pointed out, abolition of the 18-pupil "pegging" provision in 1939 was the first major change in the Illinois allocation

creation of a state board of education with power to withhold state funds from districts failing to comply with standards determined by the state board. It has, however, approved of bills for survey committees to propose voluntary consolidations. *Cf. ibid.,* July and August, 1940, and editorial: "A Good School Bill" (March, 1939), p. 34.

[31] *Laws of Illinois,* 1939, pp. 1064, 1069-1070.

[32] *Ibid.,* p. 1070. This clause was intended to stop the practice of some schools of hiring more teachers than were necessary in order to collect the state aid, sometimes paying the teachers less than the amount collected from the state. In order not to disrupt the financial affairs of such districts this clause did not apply to the year immediately preceding its passage (the school year of 1938-39). It was modified in the 1941 session to permit schools having an elementary ADA of 25 or more for three years to claim up to $1,048 per teacher, not in excess of two. *Ibid.,* 1941, p. 1129. This was done because of the opinion that the 1939 amendment worked a hardship on schools needing two teachers.

[33] *Ibid.,* 1939, pp. 1064-1070.

[34] *Ibid.,* pp. 1054, 1059, 1065.

[35] *Ill. Rev. Stat.* 1939, c. 122, secs. 705 and 706.

formula made since 1927, the 1935 amendments merely increasing the flat grants and equalization levels. The principal effect of the 1939 amendments was to alter the proportions of state aid being claimed by flat grants and by equalization aid. Prior to 1939 approximately five-sixths of the state aid money went to localities as flat grants. For the school year 1938-39 (the first year for which claims were made after the 18-pupil "pegging" provision was eliminated) the proportion of state aid claimed as flat grants fell to approximately two-thirds.[36]

In the 1941 session of the legislature the state aid law was again amended. The three most important changes were: (1) raising the equalization level for elementary schools from $51 to $56; (2) addition of a clause permitting districts with an average daily attendance of 25 resident pupils for three years to claim up to $1,048 per classroom teacher, not in excess of two, in order to allow a more liberal level of equalization for two-room schools which were adversely affected by the 1939 amendment providing that the $1,048 equalization level be computed on the basis of the number of buildings, not in excess of two; and (3) an amendment designed to induce the closing of rural schools, especially those with less than seven ADA pupils. This amendment provides that, after July, 1943, no school district which has had less than seven ADA pupils for each of the two preceding years shall be eligible to receive either the general apportionment or the equalization quota unless (1) it is determined by the Superintendent of Public Instruction and the County Superintendent of Schools that transportation of the pupils is not feasible, or (2) it is found that the district will have eight resident enrollment pupils or a total of ten enrollment pupils in the next school year. All districts not maintaining elementary schools but paying transportation and tuition costs of their elementary pupils educated in recognized schools are guaranteed, in lieu of an equalization quota, a sum which will supplement a one per cent tax and the general apportionment by an amount sufficient to pay such tuition and transportation costs, or $100 per ADA pupil, whichever is the lesser. The additional amount payable under this amendment must not exceed the equalization quota to which such a district would otherwise be entitled.[37] Another important law relating to the school consolidation problem passed in the 1941 session was a statute providing for county school survey committees to draw up proposed reorganization plans after hearings at which interested parties may appear. Formation of any proposed larger district will depend upon a favorable vote by the local community. The sum of $25,000 was appropriated for the expenses of these committees. Creation of a county survey committee in a given county was made

[36] *State Aid to Schools in Illinois* (Department of Finance), p. 19. Labovitz, *op. cit.*, p. 81. *Statistical Report of the Superintendent of Public Instruction*, 1939, p. 242.

[37] *Laws of Illinois*, 1941, pp. 1129, 1130-1132. *Ill. Rev. Stat.* 1941, c. 112, sec. 231¾ (e).

contingent upon a favorable vote by the school directors of the county.[38] Seventeen counties voted for the surveys.[39]

Proposed state school board bills, 1937, 1938. The state school board bills introduced in the legislature in the 1937 regular session and in the first special session of 1938 contained some provisions of significance for a study of the relation between state aid policy and school reorganization. The 1937 bill provided for a board of nine, appointed by the governor, which should have the following powers, among others: (1) to consolidate districts and to dissolve districts having small enrollment; (2) to prescribe standards for a minimum program of education; and (3) to order that a county's share of state aid and the county superintendent's compensation be withheld if these standards were not met.[40] This bill passed the Senate but was tabled in the House after the House Committee on Education had recommended its passage.[41] The 1938 bill differed from the 1937 bill in that no power to consolidate or dissolve districts was given to the proposed state board, but the provisions relating to a minimum program of education and the power to withhold aid were expanded to give the board power as follows:

> (5) To prescribe standards for a minimum program of education, including but not being limited to such matters as salaries of teachers, length of the class day and the school year, building standards and conditions, educational equipment, and transportation provisions. Within one year after the issuance of any rule by the Board providing for such standards, all school districts in Illinois shall comply with such standards.
>
> No district which fails to comply with the standards established by the Board . . . shall be entitled to receive any funds distributed under the provisions of . . . any . . . law providing for the payment of State funds to school districts.[42]

These provisions suggest the possibility that the state board, notwithstanding the elimination of the outright grant of power concerning consolidation of districts, might have been able to include in its standards of a minimum program of education certain requirements regarding school enrollment and size of district. While this interpretation was not put on the bill by all of its opponents, the broad language cited doubtless contributed to its defeat by arousing fears of compulsory consolidation.[43] The Illinois State Teachers' Association, the Illinois Agricultural Association, and the Illinois Association of School Boards opposed the bills and they

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[38] *Laws of Illinois*, 1941, pp. 1137-1141.

[39] Champaign, Coles, Bureau, Cook, Du Page, Ford, Gallatin, Hamilton, Kane, Lake, La Salle, McHenry, Perry, Piatt, Pulaski, Schuyler, and Union. *St. Louis Post Dispatch*, October 17, 1941. Letter from C. E. Vick, Assistant Superintendent of Public Instruction, Dec. 5, 1941.

[40] S. B. 1, 60th General Assembly, 1937.

[41] *Legislative Synopsis and Digest*, 1937 (Final), p. 1.

[42] S. B. 6, 60th General Assembly, First Special Session, 1938. Tabled in the Senate after second reading.

[43] "This . . . bill was supported by officials, legislators and organizations whose primary purpose was to force consolidation of schools, especially country schools." "Special Session of the Sixtieth General Assembly," *Illinois Agricultural Association Record* (August, 1938), p. 7.

were defeated, despite the fact that they were supported by the State administration.[44]

Proposal for encouragement of formation of larger districts. In 1938 the Department of Finance published a monograph containing a proposal for the use of state aid policies to encourage local people to form larger school units of taxation and administration.[45] This proposal suggested that certain minimum requirements be established for the organization of the new type districts. One requirement would be maintenance of twelve grades. Other requirements tentatively suggested were a minimum area of 50 square miles and a minimum enrollment of 1600 pupils in the twelve grades. Such districts would be guaranteed the same level of equalization as other districts, but a lower qualifying rate of 40¢ per $100 of *full* valuation was suggested. Where the assessment ratio is 40 per cent—a typical down-state ratio—this would mean a qualifying rate of $1.00 per $100 of assessed valuation, as compared to the present $1.50 qualifying rate in the case of "unit" systems[46] and $1.75 where a separate high school district is superimposed on the elementary school districts. In this way it was hoped to give a financial incentive to the formation of such new type districts. Flat grants on a per-pupil basis would be paid to such large districts as in the case of the present districts, the equalization grant to the proposed larger district being supplementary to the present general apportionment rather than replacing it.[47] While such a bill has not yet been introduced into the legislature, the fact that there has been proposed such a frontal attack on the problem of state aid for school consolidation would indicate that the state's educational leadership will in the future think increasingly in similar terms.

Summary

State aid to the common schools has increased during the last three decades from approximately $1,000,000 to over $16,000,000 per year. By far the major portion—approximately nine-tenths—of the cost of common schools, however, is still borne by the local communities. The allocation formula by which the common school fund has been apportioned to

[44] *Cf. ibid.,* and L. R. Grimm, "The Special Legislative Session," 27 *Illinois Teacher* (September, 1938), p. 13. Paul Matthias, "What's Going On at Springfield," *Illinois Agricultural Association Record* (June, 1937), p. 31. Attitude of Illinois Association of School Boards given orally to the writer by its Executive Secretary. These organizations have, however, supported a bill creating a state board of education with advisory powers only (H. B. 41, 60th General Assembly, First Special Session, 1938). Grimm, *op. cit.,* p. 13. These organizations have also supported bills for survey committees to *recommend* consolidations which would necessitate a vote of the people affected before becoming operative. E.g., *cf.* B. I. Griffith, "Illinois Small School Problem," 29 *Illinois Education* (October, 1940), p. 37, and editorial comment, 27 *Illinois Teacher* (February, 1939), p. 163.

[45] *State Aid to Schools in Illinois* (Department of Finance). This proposal was drafted by Allen D. Manvel.

[46] Common school districts maintaining twelve grades.

[47] *State Aid to Schools in Illinois,* pp. 59 ff. Letter from Allen Manvel, Director of Research, Illinois Agricultural Association, June 14, 1941.

school districts first emphasized the number of educables, then the reward-for-effort principle, and finally, since 1927-28, the equalization principle. Notwithstanding an increase in emphasis on the principle of equalization, approximately two-thirds of the state aid (excluding county superintendents' compensation, orphans' tuition payments, etc.) is still distributed on the basis of a flat grant per elementary attendance pupil.

In recent years there has been increasing attention to the problem of providing allocation formulae which will encourage the discontinuance of small elementary schools. Evidences of this tendency are seen in the attitude of the Horner administration that reorganization should precede increase in state aid, lest such increases merely intrench the existing system; a proposed equalization program based on the weighted pupil method which would have gradually decreased the aid which small schools could claim under it; a transportation aid law; repeal of the 18-pupil "pegging" provision for calculating the general apportionments; a law denying aid to schools with less than seven ADA pupils and providing for a generous equalization grant to reimburse districts for tuition costs and transportation costs not already borne by the state; and a proposal by a state agency for a state aid law which would encourage the formation of larger school taxing districts by allowing districts meeting certain minimum requirements to qualify for equalization grants with a qualifying rate lower than that required in the case of the present districts.

Chapter IV

RELATION OF PRESENT STATE AID POLICIES TO SCHOOL CONSOLIDATION

The present Illinois state aid law can be thought of as affecting local incentive to organize larger districts or to adhere to the present system to the extent that the economic factor contributes to the complex of factors—social and psychological as well as economic—which determine whether or not local communities will desire larger attendance areas and taxing units. In the analysis which follows, the index of the extent to which the economic factor contributes to this complex is the extent to which present state aid policies subsidize the present district organization. The index to which the present state aid law subsidizes the present district system is the extent to which state aid keeps taxes in certain areas lower than they would be if the same standard of education were supported by local taxation exclusively or, stated conversely, the extent to which local taxes would have to be raised if state aid were withdrawn from inadequate units.

Transportation Aid

In 1939 a law was passed providing for state reimbursement of part of the transportation costs of elementary and high school pupils. This law provided that the state would pay three-fourths of the transportation cost, not to exceed $15 per pupil, incurred for pupils residing more than one and one-half miles from the school attended, provided that the conveyances met the standards of safety prescribed by the State Superintendent of Public Instruction. A sum of $500,000 was appropriated for the 1939-40 biennium.[1] In the first year that this legislation was in effect (the school year ending July 1, 1940) 458 districts in 84 counties filed claims for $274,484.14, which were paid in full.[2] By the second year the claims had increased to $330,348.29.[3]

In the 1941 regular session of the legislature the appropriation for transportation was increased to $775,000 for the succeeding biennium.[4]

[1] *Laws of Illinois,* 1939, pp. 280-281.

[2] E. L. Coberly, "Transportation Reimbursement Paid," 29 *Illinois Education* (Nov., 1940), p. 76.

[3] The claims were not paid in full, however, appropriations being sufficient to pay only 68 cents per dollar claimed. *Opinion of Attorney General,* September 9, 1941. For the school year 1940-41, 89 counties claimed aid as compared with 84 for 1939-40, although only 446 districts claimed aid in 1940-41 as compared with 458 for 1939-40. The number of pupils transported increased from 26,678 in 1939-40 to 33,048 in 1940-41. Data for 1940-41 are advance statistics made available by the Office of the State Superintendent of Public Instruction. For 1939-40 data, see Table 1. Data for 1940-41 broken down by type of district comparable to Table 1 were not available at the date of writing. There is some indication, however, that the number of transporting districts with one, two, or no teachers has decreased and that the number of transporting elementary districts with three or more teachers has increased.

[4] *Laws of Illinois,* 1941, p. 69.

In the same session there was also enacted an amendment to the transportation aid statute permitting any school district to contract with one or more districts for the transportation of pupils resident in the first district, thus making it unnecessary for a district to own or rent a conveyance for its pupils in order to take advantage of the statute.[5]

Evaluation of the effect of transportation aid on school consolidation must be qualified at the outset by the statement that the only data available for analysis at the date of writing are for the first year of its operation. Transportation and the amount of aid claimed may be expected to increase and to affect school practice more than the data for the first year might suggest. For example, the transportation aid statute, passed in the spring of 1939, may have influenced more directors to close rural schools in the spring of 1940 than in the spring of 1939. Also, the 1941 legislation permitting boards to contract for transportation of their pupils may be expected to increase the effectiveness of transportation aid in inducing the closing of rural schools.[6] The full effect of the latter legislation upon the closing of rural schools may not be felt until the school year of 1942-43, since most teaching contracts in rural schools were probably made before the date of the approval of the act.[7]

Factors tending to make transportation aid lead to reorganization. Evaluation of the effect of the Illinois transportation aid law on school consolidation will be facilitated by making a distinction between school *attendance areas* and school *taxing units*. From the standpoint of attendance areas, transportation aid which leads to the closing of rural schools reduces the number of rural *schools* (attendance areas), although the small rural taxing unit remains in existence.

One way in which transportation aid may operate to induce consolidation of attendance areas is to provide an economic argument for winning over public opinion in rural areas which oppose the closing of rural schools.[8] The extent to which transportation aid has thus far induced the closing of rural schools is difficult to measure because of the limitations of the data at hand, as pointed out above. The following statistics are of interest, however, even if they must be interpreted with caution. For the school year 1939-40, the first year of the operation of the transportation aid legislation, 107 no-teacher districts claimed transportation aid (Table 1). This number of no-teacher districts was only approximately

[5] *Laws of Illinois*, 1941, pp. 1199-1200.

[6] *Cf.* I. F. Pearson, *The Organization of School Districts* (Illinois Education Association, Study Unit No. 3, December, 1940).

[7] The act was not approved until July 21, 1941. Teachers in rural schools are usually hired before the first of June.

[8] L. R. Grimm, *State Aid Issues in Illinois* (1940), pp. 14-15. "Already it is being found that the state transportation grant up to $15 per pupil is a good talking point to which rural people are willing to listen." *Ibid.*, p. 15.

one-fourth of the total number of such districts with pupils, however.[9] In a group of 13 counties, of 15 no-teacher districts claiming transportation aid in 1940, approximately one-half of such districts were without teachers for at least one year prior to the 1939-40 school year.[10] Another interesting fact is that, in 1939-40, in a sample group of 24 counties, more pupils were transported in rural one- and two-teacher schools than were transported in no-teacher districts.[11] Also, as shown in Table 1, the overwhelming majority—almost 95 per cent—of the pupils for which transportation aid was claimed in 1939-40 were transported by high school districts or by elementary districts employing three or more teachers. Pupils transported by no-teacher districts accounted for less than three per cent of the pupils for which transportation was claimed. Thus it is apparent that, in the first year of operation of the transportation aid legislation, the effect upon the consolidation of even school attendance areas was

TABLE 1.—SUMMARY OF STATE TRANSPORTATION AID CLAIMS IN 1940*

Type of District	Number of Districts	Number of Pupils Transported	Percentage of Total Transported	Average Cost per Pupil
Elementary Schools:				
No teachers	107	644	2.4	$45
One or two teachers	74	765	2.8	24
Three or more teachers	119	10,986	41.2	25
High Schools	158	14,283	53.6	29
Total	458	26,678	100.0	$28

*Data analyzed and made available by Allen Manvel, Director of Research, Illinois Agricultural Association.

negligible. As has been pointed out above, as school administrators and school boards become aware of the provisions of the act, and especially of the amendment permitting contracts between districts, an impetus to the closing of rural schools can be expected.[12] The above figures suggest that the impetus will have to be substantial if the transportation aid legislation can be conceived as being as important from the standpoint of inducing consolidation of rural elementary attendance areas as it is in reimbursing the transportation expense of districts where pupils are already educated in systems of three or more teachers.

[9] In 1939-40 there were at least 463 no-teacher districts, of which at least 429 had pupils resident in the district. In 34 of these districts the data were not available. (Memorandum regarding proposed legislation altering state aid provisions for districts having less than seven pupils in attendance. Research Department, Illinois Agricultural Association, Chicago, Illinois.)

[10] *Transportation Aid Claims*, 1940, Office of State Superintendent of Public Instruction, Springfield, Illinois. The thirteen counties are those listed in Table 2.

[11] *Ibid.* The 24 counties consisted of the 13 listed in Table 2 plus 11 additional counties taken in alphabetic order from a sample of 35 counties used by the Illinois Education Association for estimates of the common school fund.

[12] *Cf.* I. F. Pearson, *The Organization of School Districts* (Illinois Education Study Unit No. 3, December, 1940).

The above considerations have been devoted to the question of consolidation of attendance areas without consolidation of taxing units. From the standpoint of consolidation of taxing units, the transportation aid now available may operate to encourage such consolidation in three ways. (1) To the extent that it encourages consolidation of attendance areas it will tend to broaden the horizons of rural people and to diminish their distaste for being included in a larger political unit for school support and control. (2) The mere fact that there is a transportation statute on the books will serve to remove an argument against consolidation of taxing units accompanied by consolidation of attendance areas—namely, the possibility that transportation costs might, during the first few years after consolidation, minimize or wipe out altogether savings to the local community which result from centralizing attendance. (3) Another way in which transportation aid is said to encourage consolidation of taxing units is that such aid would meet an objection of rural people to being included in large school taxing units due to the disparity in assessment ratios between urban and rural areas. Rural property is, in general, assessed at a higher percentage of its full value than is urban property.[13] Large school districts, in which the same tax rate would apply to both rural and urban areas, would thus mean that rural areas would carry more than their fair share of the burden. It is argued that transportation aid would tend to meet this objection, since transportation is a service mainly for rural children, and that the state's assuming this cost would largely compensate for the disparity of assessment ratios.[14] It is arguable, however, that rural people have a right to expect transportation of their children at public expense when attendance areas are merged, even if there were no disparity in assessment ratios. If this is granted, transportation aid cannot be looked upon as a gift from the state to compensate for the difference in assessment ratios.[15]

Possible tendency of transportation aid to intrench the present district organization. From the standpoint of consolidation of school taxing units, transportation aid may not be an unmixed blessing. To the extent that it induces rural districts to close their schools and transport their pupils without merging the taxing district with the district or districts where the pupils are schooled, the effect of closing such schools will in some cases be to create low tax areas which may be expected to oppose consolidation of taxing units. If closing such schools results in economies great enough to permit the resulting no-teacher districts to have a low tax rate, the result is a low tax "island" with a vested interest in the existing organization. The lower that tax rates are in a given area under the present system, the

[13] *Tax Rate Limits and Assessment Ratios, 1925-1940* (Illinois Tax Commission), pp. 113 ff.
[14] *State Aid to Schools in Illinois* (Department of Finance), pp. 56-57.
[15] While no statistics are now available on the number of districts consolidated, conversations with officials and students of school administration indicate that there has been little if any impetus given to consolidation of rural districts since 1939.

more difficult will it be to establish economic inducements to consolidate taxing units, due to the cost to the state which would be entailed by a state aid plan generous enough to give rates which will be less than the rates prevailing at present in the low rate areas.

The educational tax rates for 1939-40 of no-teacher districts in selected counties were investigated. In a sample group of 13 counties,[16] 15 no-teacher districts were found which claimed transportation aid. The median tax rate of this group was 38 cents per $100 of assessed valuation, four having made no levies. In 1935-36, the median rate for no-teacher districts for the entire state was 21 cents, while it was 49 cents for one-teacher districts with less than twenty pupils, 58 cents for such districts with 20 or more pupils, and $1.00 for districts with two or more teachers. These figures indicate that the tax rates of no-teacher districts are, on the whole, well below the typical downstate rural rates.[17] These considerations suggest the possibility that if a large number (for example half) of the rural districts throughout the state were to close their schools without merging with other taxing units, the cause of consolidation of taxing units would be done more harm than good, so far as economic considerations are concerned.[18] As yet this situation is not acute, since the number of no-teacher districts and their populations, as inferred from their school attendance, is relatively small.[19] It might, however, make the establishment of economic incentives to consolidation more difficult if a substantial proportion of the rural districts centralize their enrollments without merging with other taxing units. This problem might be solved by requiring that districts which have not operated a school for a specified number of years be annexed to adjoining districts. Aside from the political difficulties of securing such legislation, such an approach is subject to the criticism that it would probably deter the closing of small rural schools and that the annexing district might not always want to annex the territory of a district closing its school. A second solution would be to establish economic incentives for the merging of taxing units by providing for lower tax rates in the new large districts than prevail throughout the area now.

[16]Sample group was same as that indicated in Table 2.

[17]The disparity between no-teacher district rates and those prevailing around them may not be as great as the above figures might seem to indicate, due to more wealthy areas being over-represented in the sample. For example, there is some indication that no-teacher districts tend to be relatively more numerous in counties with high taxpaying ability than in counties with low ability. It has been estimated that practically all districts with less than seven pupils in average daily attendance could, by transferring their pupils to other schools reduce their tax rates, many of them by one-half or more. "Illinois Rural Schools Hit by Steady Decline in Enrollment," 19 *Illinois Agricultural Association Record*, No. 3 (March, 1941), p. 27.

[18]It might be argued that, if *all* rural schools were closed and the pupils schooled in urban centers, the increased use of facilities in urban centers and the tuition collected from rural districts might reduce unit costs so that tax rates in these centers, as well as in the rural districts, would be reduced. That this tendency would be great enough to reduce very much the disparity between the rates of no-teacher districts and the rates of districts maintaining schools would seem to be very problematical, however.

[19]Of 2,211 districts with less than 7 ADA in 1939-40, 374 were no-teacher districts. Mimeographed release, Research Department, Illinois Agricultural Association, No. 687-a, January, 1941.

General Apportionment and Special Equalization Aid

Since 1927 the major portion of the state aid going to the common schools has consisted of a "general apportionment" or fixed sum (now $11) per ADA pupil and a special equalization quota sufficient to enable needy districts which levy the qualifying rate to have enough revenue to maintain a given level of expenditure. Until 1939, districts with less than 18 pupils received credit for 18, as far as the general apportionment was concerned. The equalization level was successively raised to $51 per elementary pupil in 1939 and to $56 in 1941. Until 1939 the equalization level was also defined as a specified sum per teacher, but this feature obtains now only for one-teacher schools and for two-teacher schools with more than 25 attendance pupils, the per-teacher minimum now being $1,048.[20]

The 18-pupil "pegging" provisions and the per-teacher minimum. While various features of the law have been changed since 1927, the main pattern remains: a general apportionment plus special equalization aid. It has been suggested that the effect of some of these features has been to intrench the present small district system.[21] For example, the 18-pupil "pegging" provision, in effect until 1939, assured to some small schools more aid if they operated separately than if they were consolidated. This can be seen if three non-special aid districts each having five pupils be assumed. Each district would be entitled to claim $198 ($11 × 18), or $594 for the three districts. If the three districts were to combine, the new district with 15 pupils would also be entitled to claim only $198.

It is arguable, however, that the discouragement to consolidation would not be very strong, since it would be outweighed, from the standpoint of financial burden, by the fact that the cost of maintaining three schools with 5 pupils each would be $2,000 or more, whereas the cost of maintaining only one with 15 pupils would be about $1,000. Even with this "pegging" provision, consolidation would still be desirable if economic factors alone are considered. If the argument is confined to economic considerations, and psychological factors are ruled out, it can be argued that with the "pegging" provision in effect, the people in the three local districts assumed would not operate three schools at a cost of $1,000 more in order to claim an added $396 from the state. Basing the general apportionment on the actual attendance, however, would result in making consolidation in such a case as that assumed even more attractive from a financial point of view than when the "pegging" provision was in effect, since the general apportionment would remain the same after consolidation as before. In other words, with the 18-pupil "pegging" provision

[20] See Chapter III.
[21] See Chapter II.

(and assuming that the 15 pupils could be educated for $1,000 in one school) the financial saving to the locality would be only $604 ($1,000 minus $396); without the "pegging" provision, the financial saving would be $1,000.

When the 18-pupil "pegging" provision was abolished in 1939, the per-teacher equalization goal was increased from $850 to $1,048. Therefore, for equalization districts, the effect was to keep the "pegging" provision[22] ($850 plus $198 is $1,048). Abolition of the "pegging" provision and raising equalization levels changed the proportions between general and special aid. In 1938 approximately one-sixth of the state aid was distributed as special aid. In 1939 approximately one-third was distributed as special aid.[23] Assuming the three districts described in the preceding paragraph to be special aid districts, it can be argued that, insofar as equalization districts are concerned, the present law still discourages consolidation, since the three districts assumed would be guaranteed more if operated separately than if consolidated, with the same rejoinder to this argument being possible as was pointed out in the preceding paragraph.

Defining the equalization goal in terms of a minimum sum per teacher changes in significance as the equalization goal per pupil changes. For example, when the equalization goal was $850 per teacher or $30 per pupil,[24] as it was from 1935 to 1939, schools with less than 28.3 attendance pupils per teacher would find use of the per-teacher guarantee more advantageous ($850 divided by $30 is 28.3). When the equalization goal was $1,048 per teacher or $51 per pupil, as was the case from 1939 to 1941, schools with less than 20.5 attendance pupils found the per-teacher guarantee more advantageous ($1,048 divided by $51 is 20.5). When the equalization goal was changed to $1,048 per teacher or $56 per pupil in 1941, only schools with an average daily attendance of less than 18.7 found it advantageous to use the per-teacher minimum ($1,048 divided by $56 is 18.7). Similarly, if the per-pupil goal were eventually raised to $75, the per-teacher minimum would be advantageous only to schools with less than 14 average daily attendance per teacher. From this it may be argued that increasing the per-pupil goal does not give more aid to the small attendance schools, which find the per-teacher goal more advantageous, but would help the needier elementary schools where the number of pupils per teacher is reasonable.[25] So far as the effect of the per-teacher minimum is concerned this is true, but it is also true that, as the per-pupil goal is raised, smaller schools find the per-pupil goal more advantageous,

[22]The general grants are to be counted in determining special aid under the 1939 amendments. Prior to 1939 they were not. See Chapter III.

[23]*Statistical Report of Superintendent of Public Instruction*, 1938, Table 51. *Ibid.*, 1939, Table 51a.

[24]Not counting the general apportionments.

[25]*The Common School Bills* (Illinois Education Association, 1941), p. 2.

and smaller and smaller schools are subsidized more generously by the state than when they were using the per-teacher goal. For example, if the per-pupil equalization goal were raised to $75, a one-room school with an average daily attendance of 15 would be more generously subsidized than it is now. In answer to this it is arguable that, since the larger schools would be similarly subsidized, more generous subsidization of one-room schools would not operate to intrench such schools, since the advantages of having children educated in the larger systems would be increased at the same time.

Financial data for school districts for the years 1937-38 and 1939-40 were studied for the purpose of comparing the state aid distribution before and after the 18-pupil "pegging" provision was abolished and the equalization level raised from $41 to $51. The districts in two counties—Champaign and Pike—were studied in an intensive manner. These two counties were selected because the former is a county in which relatively little special aid is claimed, while the latter relies on special aid to a marked degree. Another consideration was the relative convenience in obtaining data for these two counties. Dividing a district's aid claim by its assessed valuation furnishes an index of the extent to which the state is subsidizing such a district, since it indicates the extent to which a tax increase would be necessary if the same amount of revenue were to be raised by local taxation. Comparing the distributions for the two years in Champaign County reveals that the typical one-room district was subsidized to a lesser extent in 1940 than in 1938 (as a result of abolition of the "pegging" provision), although even in 1938 the typical tax increase necessary had state aid been withdrawn was less than 20 cents per $100 of assessed value. In Pike County, on the other hand, most of the districts —approximately 80 per cent—are special aid districts. One-room special aid districts fared practically the same under the two distributions, since in 1940 they regained as equalization aid what they lost as general grants (due to elimination of the "pegging" provision) and since they were, in general, small-enrollment schools and claimed equalization aid on the basis of the per-teacher minimum rather than on the basis of the number of pupils.

Study of a group of sample counties points to the same conclusions. Dividing the state aid claims of various classes of districts by their assessed valuations gives a typical hypothetical tax rate which would have been necessary had such districts raised the same amount of revenue by local taxation. Since such a procedure does not take into account the extent to which assessed values per teacher and per pupil vary from district to district, such hypothetical tax rates must be interpreted as expressions of the points of central tendency about which the hypothetical tax rates for the individual districts in those counties would vary markedly.

Such expressions of central tendency do, however, afford a rough standard for comparison. Study of these hypothetical tax rates reveals that, in counties in which relatively little special aid is claimed—Adams or Champaign for example—the difference between the two years for three-or-more teacher districts is slight, but that the difference is more marked in the case of one-, two-, and no-teacher districts, although the degree of subsidization of the smaller districts was not very great even in 1938, when it is expressed as a tax rate (Table 2). In the case of counties relying on special aid—Effingham or Pike, for example—three-or-more-teacher districts were subsidized more generously in 1940 than in 1938, but in some cases still not as much as were the one-, two-, and no-teacher districts in 1940.

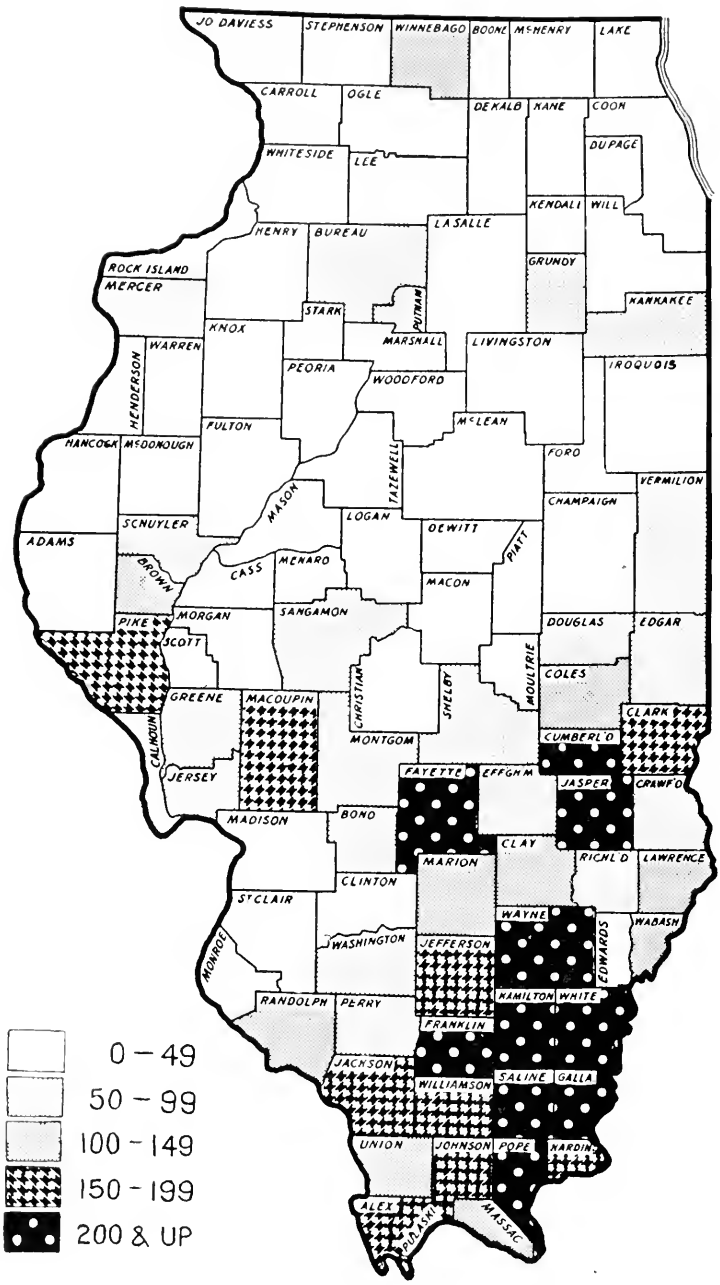
Variations in reliance on special aid. As shown on the accompanying map (page 42), there is considerable variation between areas in the state in the extent to which schools rely on state aid for their support. The extent to which a county relies upon state aid is largely dependent upon the extent to which its districts claim special aid. Appreciation of these facts makes possible a few tentative evaluations of the policy of withdrawing the present state support to induce school reorganization. In

TABLE 2.—STATE AID CLAIMED BY COMMON SCHOOL DISTRICTS IN SELECTED ILLINOIS COUNTIES IN 1938 AND 1940*

(per $100 assessed valuation)

County	Districts with Three or More Teachers		Districts with Less Than Three Teachers	
	1938	1940	1938	1940
Adams	$0.12	$0.11	$0.17	$0.12
Champaign	0.23	0.25	0.16	0.10
Effingham	0.27	0.30	0.40	0.36
Jefferson	0.82	0.82	1.18	1.13
Kane	0.11	0.16	0.13	0.11
Madison	0.28	0.42	0.14	0.71
McDonough	0.27	0.26	0.14	0.11
Ogle	0.17	0.17	0.15	0.09
Pike	0.63	0.71	0.76	0.78
Sangamon	0.22	0.20	0.17	0.12
Saline	1.70	2.78	1.22	0.32
Vermilion	0.30	0.34	0.19	0.15
Woodford	0.21	0.20	0.16	0.12

*The counties selected include the ten used in other school studies (e.g., *Teacher Tenure in Illinois*, Illinois Legislative Council) plus three others (Adams, Champaign, and Pike) with which the writer was more or less familiar and which offered opportunities for intensive investigation. The results in the table were obtained by dividing the amount of state aid claimed (Office of Superintendent of Public Instruction) by the assessed valuation for the county (*Property Tax Assessments, Levies, Rates, and Extensions*, 1937-39, Illinois Tax Commission). State aid claimed by independent high school districts is not included, although the figures for 1940 include small amounts of special aid claimed by unit districts, whose equalization goals are determined in terms of high school as well as elementary attendance. There is no mathematically sound way of excluding the amount of special aid claimed by such districts because of high school pupils.



Ratio (per cent) of special aid to general aid in districts operating grades 1-8. The percentages were computed from *Statistical Report of Superintendent of Public Instruction*, 1939, Table 51a.

counties where most of the state aid is claimed as general grants, it is doubtful if such a policy will be very effective, since only a small tax increase would be necessary to replace the state aid lost. In areas relying heavily on special aid the tax increase would be considerable and the economic inducement correspondingly more effective, but such areas constitute only a relatively small part of the total area of the state. Also, counties in which withdrawal of aid would be of only limited effect account for a large percentage of the rural elementary enrollment. For example, if it be assumed that withdrawal of state aid would be effective only where the special aid for common school districts amounts to 50 per cent or more of the general apportionment, only about one-half of the rural elementary enrollment would be included in counties in which this ratio of special to state aid held true. If it be assumed that withdrawal of aid would be effective only where the special aid amounts to 100 per cent or more of the general apportionment, only about one-third of the rural elementary enrollment would be included in counties in which this ratio of special to general aid held true.[26]

The effectiveness of withdrawal of state aid would also be limited by the fact that in areas in which it would be most effective such a policy could be employed with less justification than in the more wealthy counties where the amount of special aid is relatively low. This is because areas relying heavily on special aid tend to be areas in which the percentage of rural road mileage unimproved is relatively high. While there are numerous exceptions as far as individual counties are concerned, strong reliance on special aid tends to be associated with percentage of road mileage unimproved.[27] This evidence does not necessarily mean that the number of small schools that will have to be maintained is directly proportional to the percentage of rural road mileage unimproved, because the surfaced roads bear more than their proportionate share of the traffic and contain more than their proportionate share of the farm units.[28] It does indicate, however, that there is considerable variation throughout the state in rural

[26]Computed from *Statistical Report of Superintendent of Public Instruction,* 1930, Tables 3 and 51a.

[27]Data on the percentage of unimproved road mileage was furnished by the Illinois Division of Highways. The percentage of reliance on special aid was calculated from Table 51a of the *Statistical Report of State Superintendent of Public Instruction,* 1930. The coefficient of correlation between reliance on special aid and unimproved road mileage was found to be .40, with a standard error of .076. However, no precise significance can be attributed to the coefficient, since the distribution for the X-variable (per cent special aid was of general apportionment) is badly skewed.

[28]Figures are not available by counties, but rough estimates as to the extent to which this is true typically can be made in terms of state totals. In 1940 approximately 72 per cent of the rural mileage in the state was surfaced. It is estimated, however, that well over 90 per cent of the rural travel is on surfaced roads, and records of the Division of Highways indicate that approximately 82 per cent of the farm units and other rural dwellings in the state are on surfaced roads. *Mileage of Rural Highways in Each County in Each Highway System by Type of Surface* (Table RI-1, January 1, 1940, Bureau of Highway Research, Illinois Division of Highways). Letters from F. N. Barker, Engineer of Highway Research, Division of Highways, Springfield, Illinois, November 3 and November 7, 1941.

road conditions; that, in general, areas relying heavily on special aid tend to be areas with relatively high percentages of unimproved road mileage; and that some small rural schools may have to be maintained in such sections of the state until more roads are surfaced.

Withholding Aid from Schools with Less Than Seven Attendance Pupils

In the 1941 regular session the Legislature enacted a statute providing that, after July 1, 1943, no school district with an elementary resident ADA of less than seven pupils would be considered a recognized school or receive state aid, unless it was determined that transportation was not feasible or that the district would have a resident enrollment of eight or a total enrollment of ten during the next school year.[29] It was also provided that districts which close their schools and pay tuition and transportation costs of their pupils might claim equalization aid to supplement the proceeds of a one per cent tax rate and the general apportionment by an amount sufficient to pay the cost of such tuition and transportation up to $100 per ADA pupil.[30]

Since no later data were available at the time of writing, estimates have been worked out on the basis of 1940 data to indicate the manner in which the legislation would operate. In the school year 1939-40 there were 2,211 districts which had less than seven resident pupils in average daily attendance. Of these 2,211 districts, 1,837 employed a teacher, while 374 were without teachers. These 2,211 districts represented approximately 23 per cent of the 9,665 one-teacher and no-teacher districts in the state, but only one-twelfth of the average attendance in one-teacher and no-teacher districts.[31] These 2,211 districts received only approximately 2 per cent of the state aid claimed for the 1939-40 school year.[32]

Similar legislation in other states. Evaluations of the effectiveness of such laws in other states in bringing about consolidation of either attendance areas or taxing units must be qualified and tentative, since they are but one of several factors affecting the extent to which consolidation has taken place. Study of the opinions of state school officials does, however, reveal certain features about the experience of other states which are of significance for Illinois.

[29]The determination was to be made jointly by the State Superintendent of Public Instruction and the County Superintendent of Schools.

[30]*Laws of Illinois*, 1941, pp. 1130-1131.

[31]"Memorandum regarding proposed legislation altering state aid provisions for school districts having less than seven pupils in attendance." (Mimeographed release, Research Department, Illinois Agricultural Association, No. 687-a, January, 1940).

[32]State aid for districts with less than seven pupils in 1939-40 was estimated at $256,638. (Letter of June 10 from Allen D. Manvel, Director of Research, Illinois Agricultural Association). Total aid claimed in the state was $12,277,122. (Advance statistics made available by Office of State Superintendent of Public Instruction.) The latter figure includes high school aid. The amount of state aid claimed by one-teacher and no-teacher districts is not available.

School officials in five states (Kansas, New York, Oklahoma, Texas, and Wisconsin) reported that limiting the amount of state aid received by small schools had tended to cause consolidation of attendance areas. Two states (New York[33] and Wisconsin[34]) reported that such legislation had tended to bring about mergers of school taxing units, but Kansas reported that, on the whole, that had not been the case in that state. Michigan reported that there had probably been a slight tendency for small districts to disorganize due to a withdrawal of state aid.[35] Three states (Michigan, New York, and Oklahoma) reported that the effectiveness of withholding aid in encouraging consolidation was attributable to the fact that state aid represented a substantial proportion of school revenues and that maintenance of a small school without state aid would mean a high tax rate. Kansas reported that the main tendency was for the district to persist as a taxing unit after its enrollment was centralized. Texas reported that, if it were not possible for financially weak districts to educate their children in another district, the number of consolidations of taxing units would be materially increased. New York indicated that some small districts merged with contiguous districts, but more often remained as a taxing unit although maintaining no school. Oklahoma reported both tendencies. Kansas and Texas reported that, where small districts closed their schools and transported their pupils, there was a tendency for them to become low tax areas which can be expected to oppose consolidation of taxing units. New York reported that such districts are typically low tax areas, but are so scattered as to be not very effective in opposition to consolidation of taxing units; and also that, as a result of the liberal aid to central school districts, it is probable that not many of the present small districts would become high tax areas after consolidation.[36]

Anticipated fiscal effects. To the extent that the 1941 Illinois legislation withdrawing aid from small schools induces the closing of such

[33]"There are approximately 300 districts affected by this law, 38 of which have already consolidated with other districts or have been annexed by central school districts; 124 of the number are now contracting for the education of their children with other districts." (Letter from Wayne W. Soper, State Education Department, Albany, N. Y., October 31, 1941.)

[34]Approximately 500 small districts have been consolidated since 1930, and the expectation is that 500 to 600 more will be consolidated by the end of the 1941-42 school year. An additional feature of this Wisconsin law, however, is authority vested in the State Superintendent to consolidate districts having a valuation of less than $100,000. (Letter from John Callahan, State Superintendent of Public Instruction, Madison, Wisconsin, October 31, 1941.)

[35]"It is impossible to determine the amount of consolidation that has been effected because of a limited or no allowance of state aid to smaller districts. Five years ago there were approximately 6,700 school districts in the state of Michigan. At present time we have less than 6,300. It is my belief that the majority of these districts have been somewhat influenced to give up their organization because it was no longer possible for them to operate without levying a heavy tax locally." (Letter from C. L. Taylor, Department of Public Instruction, Lansing, Michigan, November 4, 1941.)

[36]Not all of the state officials thought that the questions could be answered definitely enough to warrant counting the report from that state as being "Yes" or "No" on some of the questions. This discussion is based on letters from state school officials as follows: C. C. Vinson, Statistician, Department of Education, Topeka, Kansas, November 4, 1941; C. L. Taylor, Director, Finance

schools, it is expected that it will, on the whole, reduce local expenditures. It has been estimated that, if all such schools had been closed in 1939-40, the savings to the local district would amount to 50 per cent, on the average.[37] As far as the state is concerned, the indications are that there would be a net saving to the state as a result of such legislation. If all districts affected by the legislation were to educate their pupils in other districts, there would be no reduction in general apportionments to the districts which close their schools. To the extent, however, that such districts continue to operate, there will be a saving to the state in general apportionments. Since the extent to which they will continue to operate can be only conjectured, the saving cannot be estimated. If the districts which continue contain one-half of all the attendance pupils in such small districts, the saving to the state would be approximately $50,000 a year. The savings to the state in equalization aid would be more substantial. Such small districts in 1939-40 claimed approximately $142,000 in equalization aid. In that year approximately $22,000 in equalization aid would have been sufficient to enable the less able districts to educate their pupils in other districts. Thus the saving in equalization aid, had the legislation been operative in 1939-40, would have amounted to approximately $120,000.[38]

Anticipated effect on consolidation. Of the 2,211 operating and non-operating districts with less than seven attendance pupils in 1939-40, 286, or approximately one-eighth, were special aid districts. Assuming that the educational expenditures in such special aid districts are approximately $1,050 per district, the state aid is estimated to account for approximately 53 per cent of the educational expenditures in such districts.[39] Assuming that educational expenditures are $900 per district for operating non-special aid districts and $97 per pupil for non-operating non-special aid districts, it is estimated that state aid accounts for only 7 per cent, approximately, of the educational expenditures of non-special aid districts having less than seven attendance pupils.[40]

The foregoing figures suggest that withholding aid from non-special

Division, Department of Public Instruction, Lansing, Michigan, November 4, 1941; Wayne W. Soper, Bureau of Statistical Services, State Education Department, Albany, N. Y., October 31, 1941; Marshall Gregory, Director, Division of Research, Office of State Superintendent of Public Instruction, Oklahoma City, Okla., October 20, 1941; Myrtle L. Tanner, Director, Division of Information and Statistics, Department of Education, Austin, Texas; and John Callahan, State Superintendent of Public Instruction, Madison, Wisconsin, October 31, 1941.

[37]The average per-pupil cost in non-operating districts which reported their expenditures for the school year 1939-40 was approximately $97. It was estimated that, had schools in these districts been maintained, the cost would have amounted to approximately $208. "Memorandum regarding proposed legislation altering state aid provisions for school districts having less than seven pupils in attendance." (Mimeographed release, Research Department, Illinois Agricultural Association, No. 687-a, January, 1940.)

[38]*Ibid.*

[39]286 × $1,050 equals $300,300 (educational expenditures). Total state aid claimed by such districts in 1939-40 was $158,032.17. This is 53 per cent of the estimated educational expenditures. Letter and memorandum from Allen D. Manvel, Director of Research, Illinois Agricultural Association, June 19, 1941.

[40]*Ibid.*

aid districts would act as only a very mild economic inducement to close their schools, but that such action would put considerable financial pressure on the special aid districts, since operating without state aid would mean either raising already high tax rates or drastically curtailing expenditures. Special aid districts make up only approximately one-eighth of the districts with less than seven attendance pupils. Such small non-special aid districts, on the other hand, tend to be in relatively wealthy counties and are probably themselves relatively wealthy districts, as judged by their assessed valuation per teacher or per pupil.[41] Loss of state aid in a typical district of this type can be compensated for by a slight increase in the tax rate.[42] In the light of these facts, it is quite likely that a considerable number of such districts will continue to operate, notwithstanding the withdrawal of state aid.

To the extent that withholding aid from small schools causes the more able districts which continue to operate to raise their tax rates, the result will be favorable from the standpoint of consolidating taxing units, as distinguished from consolidation of attendance areas, since it would make less acute the problem of organizing and financing a larger district with rates not substantially higher than the rates prevailing in the area prior to consolidation. As pointed out above, such increases are apt to be slight, however, since typically state aid makes up but a small portion of the revenue of such relatively able districts. To the extent that districts are induced to close their schools and are enabled thereby to lower their rates, the result will be unfavorable from the standpoint of consolidation of taxing units, although this danger is minimized somewhat by the fact that such districts will tend to be special aid districts and therefore high rate areas. These two opposite tendencies will tend to be concentrated geographically throughout the state, depending upon whether or not a given area receives only general apportionments or depends heavily on equalization aid. If the present high rate districts which close their schools as a result of this legislation effect substantial decreases in their tax rates,[43] this unfortunate effect, from the standpoint of consolidation of taxing units, may be not inconsiderable in certain areas. To the extent that small attendance districts which close schools decrease their tax rates and those which continue to operate increase their tax rates, the result will be to lessen the range of tax rates throughout the state. This will

[41]For example, in 1935-36 for districts with less than 10 ADA the assessed value per pupil was $17,173 as compared with $6,094 for the state as a whole, excluding Chicago. Despite the lower teaching load in such districts, the valuation per teacher was $117,000 as compared with $132,000 for the state as a whole, excluding Chicago. *Cf. State Aid to Schools in Illinois* (Department of Finance), Appendix 3, pp. 02-03.

[42]The available data indicate that rates are typically low in such districts. For example, in 1935-36 the median educational tax rate in no-teacher districts was $0.21, and was only $0.40 in one-teacher districts with less than 20 pupils. *State Aid to Schools in Illinois*, Appendix 5, pp. 96-97.

[43]It has been said that many districts which would close their schools under this law could reduce their local tax rates by one-half or more. "Illinois Rural Schools Hit by Steady Decline in Enrollment," 19 *Illinois Agricultural Association Record* No. 3 (March, 1941), p. 27.

somewhat simplify the problem of devising state aid plans to encourage reorganization, since the more the districts are concentrated at the point of central tendency the easier the problem will be of choosing a qualifying rate which will serve as an inducement for a majority of the districts to consolidate.

Summary

While the full effect of the transportation aid law is probably yet to be felt, the data available indicate that, so far as the first year of its operation is concerned, it had a very limited effect on consolidation of attendance areas, since approximately 95 per cent of the pupils for which transportation aid was claimed were high school pupils or elementary pupils in districts with three or more elementary teachers. Less than 3 per cent of the pupils for which transportation aid was claimed were accounted for by no-teacher districts. An impetus to transportation of children in rural schools can be expected, however, as a result of the passage of a statute permitting districts to contract for transportation of their students. While it has as yet had a negligible effect with respect to consolidation of taxing units, transportation aid is a potential factor encouraging such consolidation to the extent that it leads rural people to think in terms of larger school communities and to the extent that it meets possible arguments regarding transportation costs and disparity of assessment ratios. To the extent that transportation aid induces centralization of rural enrollments and lowering of taxes without consolidation of political units, there is a danger of creating low tax areas with a vested interest in the present system.

Elimination of the 18-pupil "pegging" provision for calculation of the general apportionment has made possible an increase in the amount distributed as special aid. It is arguable that its abolition intrenches the present district organization less than when it was in effect, but it is doubtful if there has been much change in local sentiment toward consolidation as a result of its abolition, since the state aid lost could in most cases be replaced by small tax increases. Use of the $1,048 per-teacher minimum for calculating equalization aid for rural schools in effect retained the 18-pupil "pegging" provision for such schools which find the per-teacher goal more advantageous than the per-pupil goal. The significance of the per-teacher minimum changes as the per-pupil equalization goal is increased, since each increase means that smaller and smaller schools find it advantageous to use the number of pupils.

Withdrawing the present state support will probably be of very limited effect in large areas of the state, since the state support can be replaced in such areas by relatively small tax increases. Areas in which such withdrawal would be of very limited effect contain a relatively large propor-

tion of the rural pupils of the state. Areas in which withdrawing aid would be most effective are typically areas in which it would be less justifiable than in the wealthier areas, due to the relatively high percentages of unimproved road mileages.

Withholding aid from rural schools with less than seven attendance pupils will probably result in substantial savings to the state, on the assumption that many of such districts will continue to operate, since small tax increases will, in many cases, be sufficient to replace the state revenue lost. The experience of other states indicates that there is danger of creating low tax areas where schools are closed and the political units are allowed to persist, although the experience of New York indicates that this may be minimized if the low tax areas are scattered, are not too numerous, and if liberal aid is offered to larger units.

Chapter V

A PROPOSED BUILDING AIDS PROGRAM

It is possible to have consolidation of areas of school administration and support without there necessarily being a consolidation of school attendance areas, and conversely.[1] It is arguable, however, that enrollments in rural one- and two-teacher schools[2] must be centralized when possible, if anything approximating a modern curriculum is to be offered to such students at a reasonable cost. This raises the problem of rehousing the enrollments which become centralized. The effect of the cost of rehousing upon local incentive to consolidate must be considered.

The problem considered here is that of the extent of the need for and the cost of providing new housing facilities for elementary pupils now in rural one- and two-room schools who would be transported to urban[3] centers under reorganization plans. The problem is restricted to such pupils for two reasons: (1) It is assumed that students in small high schools which may be eliminated under reorganization plans can be absorbed by the present larger high schools without there being any need for new construction merely as a result of the slightly enlarged enrollment in these larger high schools. (2) It might be argued that the present need for school construction is not limited to the need for new facilities to provide for elementary pupils from rural schools which might be eliminated; that many elementary (and secondary) school plants of reasonable size now being used are obsolete and that the state should bear part of the cost of their replacement. Such a contention has merit, but it raises issues which are outside the scope of this study. The purpose of this study is to investigate the manner and extent to which it may be possible to employ state aid policies to induce or encourage the consolidation of units of school support and administration. In view of this fact, then, it seems proper to limit the problem at hand to a consideration of the need for and possible cost of new housing made necessary as a result of transporting elementary pupils in rural one- and two-room schools to larger attendance centers.

If consolidation of attendance areas is included in a program of reorganizing and enlarging units of support and administration, new housing will in some cases be necessary to provide for the increase in elementary enrollment in the schools chosen as the attendance centers of the new large districts. If the local districts were forced to bear the entire

[1]For a good statement of this issue, *cf. State Aid to Schools in Illinois* (Department of Finance), pp. 56-57.

[2]As used in this chapter, "rural" schools means one- and two-teacher schools.

[3]As used in this and the following chapter, "urban" means any incorporated place.

cost of new buildings as a result of this increase, it is possible that the financial burden of such new buildings would more than offset the economies resulting from better administrative practices made possible by a larger unit of administration.[4] This is probably more true with respect to the first few years after consolidation, since normally the life of the building will extend beyond the time required to amortize the bonds. Thus, from the standpoint of the tax burdens imposed, if there were no state building aid, there would in some cases be a not inconsiderable local financial burden imposed by consolidation of attendance areas—one which might not be offset in the minds of local people by the increase in educational opportunities.

In the light of the foregoing considerations it is therefore proposed that a building aids program for Illinois might start with a subsidization by the state of new building made necessary by an increase in elementary enrollment in urban centers which would serve as attendance centers for new large districts.[5] The second step would be for the state to share the burden of new construction necessary to replace present obsolete facilities in the towns which would serve as attendance centers in the new large units. There would be considerable justification, from the standpoint of those interested in school consolidation, for including this second feature along with the first when the building aid statute is drafted, since it would strengthen the inducement to form larger units. The research which must precede an inclusion of this second feature must, however, wait on a survey of present building facilities throughout the state. For this reason, and because the problem of state equalization of capital outlays not necessitated by centralizing rural enrollments raises issues outside the scope of this study, the problem treated here considers only state aid for new elementary buildings made necessary by consolidation of attendance areas.

The grant thus envisaged would be a conditional one, granted only to administrative units of reasonable[6] size which need housing facilities to

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[4]*Cf.* L. R. Grimm, *When the Old Order Changeth* (Illinois Education Association Study Unit No. 4, Jan., 1939) and *The Larger School District Unit: Some Problems and Issues in Illinois* (Illinois State Teachers Association, 1935), p. 83. Timon Covert, *Financial Implications of the Consolidation of Schools and the Transportation of Pupils* (Circular No. 117, 1934, U. S. Office of Education).

[5]Similar proposals have already been made in general terms. E.g., *cf.* L. R. Grimm, *The Larger School District Unit: Some Problems and Issues in Illinois* (Illinois State Teachers Association, 1935), p. 71, and S. E. Leland, *The Fiscal Problem of Education in Illinois* (speech published by Du Page Valley Division of the Illinois Teachers' Association, 1935), p. 33.

[6]What is a "reasonable" and politically feasible school unit for Illinois will perhaps be judged by reorganization plans drawn up by the School Survey Committees provided for by 1941 legislation. *Laws of Illinois*, 1941, p. 1137. Building grants might be conditioned on substantial compliance with the reorganization plan drawn up by the Committee for that county, or where there was no committee formed, upon certain area, enrollment, and valuation requirements. See *State Aid to Schools in Illinois, passim.* On the theory that the present independent high school districts represent in general a school community (especially where all or nearly all of the non-high school territory has disappeared), there is justification for thinking of the new taxing units as conforming to the present high school district boundaries in many cases. This approach is

accommodate an increased elementary enrollment due to consolidation of attendance areas. The problem is thus one involving additions to present elementary facilities in the attendance centers of the larger districts, rather than constructing whole new buildings for the entire elementary enrollment of the new large district.

Methods of Contribution

It is the generally accepted view, and it is assumed in this study, that the most appropriate type of building grant for Illinois would be one following the equalization pattern. It is also assumed that such a grant should take into consideration the difference in assessment ratios throughout the state and that the local contribution required for participation in the grant should be phrased in terms of full value rather than assessed valuation. Working out the details of such a proposed grant may be approached in two ways. The first approach would be to define the state's contribution as the difference between the guaranteed cost and a certain percentage of full valuation, as the new New York legislation does. The other approach would be to define the state's contribution in terms of the difference between the annual expense of amortizing the cost of the minimum building program and the proceeds of a certain tax rate calculated in terms of full value, as proposed in California.[7] The first approach would assume that the state would make its contribution in a lump sum, the local community doing likewise or bonding as it saw fit. The second approach assumes that the state would contribute each year toward the local district's debt service. The second approach has the advantage of being more just. For example, it would take into account variations between the interest rates that the various districts were forced to pay. It would also take into account changes in the full value of the district subsequent to the construction of the buildings. The first, or New York, plan in effect assumes that the full value as of the time of construction will fairly represent the district's economic power for the duration of the indebtedness and that districts will be able to borrow money on substantially the same terms. These assumptions are only approximately true. The New York plan does, however, have certain advantages from the standpoint of administrative feasibility and of constitutionality, as far as Illinois is concerned. It is assumed here that it will be more expedient for the state to make its contribution in a lump sum, since it is probable that school building construction to which the state might be expected to contribute will be spaced out over a period of years so that the state's burden

being followed in Washington. *Cf. Reports on School District Reorganization Proposals. . . .* (Typewritten memorandum dated Oct. 7, 1941, received from E. L. Breckner, Director, State Committee for Reorganization of School Districts, Olympia, Washington.) A given taxing unit might have more than one elementary attendance center.

[7]Weller, works cited.

will not all come in one year. If this is true, there seems no reason why the state should have to pay interest charges over a period of years.[8] Furthermore, even if the constitutional debt limit of the district were to permit it to bond itself for the entire cost of the project, the state helping to pay the debt service if it exceeded a certain proportion of full value, such a plan would be of doubtful constitutionality in Illinois, because of the constitutional provision that "the state shall never pay, assume or become responsible for the debts or liabilities of, or in any manner give, loan or extend its credit to, or in aid of any public or other corporation, association, or individual."[9] Indeed, it is possible that a building aid law of the type proposed here would have to be carefully drawn and carefully administered in order for it to be safe from attack in the courts under this section. For example, provision might have to be made for the state to make its contribution available to the local district or to the contractor before the district became indebted, in the technical legal sense. Perhaps two separate contracts might be necessary—one between the state and the contractor and one between the district and the contractor.

The Cost to Be Guaranteed

Distribution of building aid on an equalization basis involves guaranteeing a minimum program, in terms of minimum cost. This in turn involves determination of a unit of need and unit costs. Since the problem at hand is limited to that of rehousing elementary students now housed in rural schools, need may be determined by the number of such pupils which would have to be rehoused under a reorganization plan involving closing rural attendance centers. The financial burden imposed on a community for such rehousing will be roughly proportional to the number of additional classrooms needed, which will in turn be roughly proportional to the number of pupils involved.

In order to use the classroom and pupil as units of need, as is done here, assumptions must be made as to (1) the cost items included in the estimate of what it would be proper for the state to guarantee; (2) whether estimates should take into account amounts sufficient to pay for units in addition to classrooms and other general instruction units—e.g., gymnasiums; and (3) as to the number of pupils to be assumed per classroom and per teacher. These will be discussed in the order named.

Cost items to be included. The general construction contract, while constituting the major part of the cost of a building project, is usually far from the entire cost. In addition to this contract there must be heating

[8]Weller suggests that the state make its contribution in a lump sum due to its superior credit position, in which case the two plans become practically identical. *Cf.* his *State Equalization of Capital Outlay for Public School Purposes*, pp. 186-187, and "A Plan for State Equalization of Capital Outlays for Public School Buildings," pp. 23-24.

[9]Art. IV, sec. 20.

and ventilation, plumbing, and electric contracts. These four contracts may be estimated to account for approximately 65 per cent of the cost of a building project, on the average.[10] Since these four contracts would be necessary in all cases where new facilities had to be built, it seems only reasonable that they be considered in estimating the cost to be guaranteed by the state. The same may be said of miscellaneous items (such as the cost of the bond issue and architect's fees) which may be assumed to account for approximately six per cent of the complete cost of the project. As to cost of equipment, the same reasoning would indicate that the state's guarantee should include a reasonable allowance for equipment, which may be assumed to be approximately five per cent of the total cost of the program on the average. This consideration is subject to the qualification that some of the existing equipment of rural schools might be used in the new building; in administering the state aid proposal, perhaps a deduction should be made to the extent that this is true.

Where it is necessary to buy land, equity would demand that the state's guarantee be based on the assumption that new land will have to be secured since, where this is true, the cost of the site is not an inconsiderable item in the total cost of the project—probably ten per cent, typically. In some cases, however, consolidation of elementary attendance centers will probably necessitate only additions to present buildings which are on sites large enough to accommodate the new building and enrollment comfortably. In the absence of data on the extent to which present elementary sites in urban centers could accommodate additions without undue crowding, this question can only be resolved tentatively by recourse to some estimates regarding the extent to which present schools of various sizes would be expected to absorb the present enrollment of rural elementary schools. Although the figures in Table 3 should be interpreted as rough approximations, they indicate that, if rural children were taught in districts now employing three or more elementary teachers,[11] schools of 50 to 200 attendance pupils would have their elementary enrollment increased 140 per cent, while the 200 to 1,000 group would experience an increase of approximately 35 per cent. Over 85 per cent of the rural elementary enrollment would be rehoused in centers in which the elementary average

[10]Estimates of the average percentage of total cost consumed by the various cost items are based on Stuart H. Jones, "Budget Plan for Checking Income and Costs That May Be Incurred in the Planning of a Single School Building," in Q. M. Whipple, ed., *The Planning and Construction of School Buildings* (33rd Yearbook of National Society for the Study of Education, Pt. I, 1934), pp. 82-84. On this point generally, see also N. L. Engelhardt, Jr., "School Building Costs," in *The American School and University*, 12th ed., 1940, pp. 13 ff., and 90 *American School Board Journal* (June, 1935), pp. 38-39.

[11]Some students of educational administration might argue that assuming attendance centers in towns where there are now three-teacher schools would result in some attendance areas not large enough to be efficient. It is recognized that in some areas there would be no need or justification for an attendance center in such small towns. A three-teacher school is assumed to afford a nucleus for a possible six- or eight-teacher school if surrounding rural children were educated in

daily attendance now is less than 500.[12] Excluding land from the estimates upon which a building aid plan is based could be justified only on the assumption that present sites in such centers are from 35 to 40 per cent larger than is necessary—which is highly improbable. In the larger centers also it seems reasonable to assume that new sites would have to be bought, since class sizes in these centers tend to run larger than in the smaller centers,[13] and land costs are probably high enough so that site area per enrollment does not at present exceed an adequate minimum.

The building program in relation to the curriculum. Before discussing the second and third issues mentioned above—whether estimates should

TABLE 3.—DOWN-STATE ELEMENTARY ENROLLMENT IN SCHOOLS WITH THREE OR MORE TEACHERS, 1936, CLASSIFIED BY SIZE OF SCHOOLS*

Size of School (ADA)	Number of Districts	Percentage of Total Number of Districts	ADA Pupils	Rural ADA Pupils to Be Absorbed†	Cumulative Totals	
					ADA Pupils	Pupils to Be Absorbed
1-50	62	6	2,551	9,100	2,551	9,100
50-100	399	37	29,029	56,100	31,580	65,200
100-200	275	25	38,857	37,800	70,437	103,000
200-300	96	9	22,557	13,600	92,994	116,600
300-400	56	5	19,507	7,500	112,501	124,100
400-500	39	4	17,295	6,700	129,796	130,800
500-1000	73	7	52,456	10,600	182,252	141,400
1000-	76	7	193,155	10,600	375,407	152,000

*Data derived from *State Aid to Schools in Illinois* (Department of Finance), pp. 92-93.

†Assuming that each school with three or more teachers absorbs an equal proportion of pupils now educated in rural one- and two-room schools. Figures were obtained by multiplying the number of attendance pupils in rural one- and two-room schools in 1936 (152,000; *State Aid to Schools in Illinois*, p. 92) by the percentages in the third column.

include the cost of units other than classrooms, and the number of pupils to be assumed per classroom and per teacher—it should be pointed out that what is considered an adequate building program to be guaranteed by the state will depend to a considerable extent on the kind of cur-

the present three-teacher school. In other words, the estimates are desired to err on the side of conservatism, if at all. This is because of a desire not to think in terms of attendance areas requiring elementary children to walk or ride too long a distance; a desire to keep abandonment of adequate buildings to a minimum; and a desire to think in terms of a program that rural people can be brought to accept within the near future, even though maximum efficiency would not be attained.

[12]The figures on which these estimates are based are for 1936, but are the latest which can be obtained. It is unlikely that trends since 1936 have altered the relationships shown in the table to an extent sufficient to make their use indefensible. It is emphasized that these estimations should be interpreted as rough approximations, since they rest on assumptions which are only approximately true. For example, it is assumed that the new larger attendance areas will be of approximately equal size and that the smaller urban centers will serve as centers for the new attendance areas. These figures leave out of account the extent to which present facilities would accommodate rural pupils if used to capacity.

[13]*State Aid to Schools in Illinois* (Department of Finance), p. 92.

riculum that is contemplated. A plant necessary to accommodate a modern enriched curriculum is likely to be more costly than one adequate to house a traditional curriculum. Three important factors contributing to higher costs are: (1) gymnasiums, auditoriums, and other special rooms; (2) higher expenditures for equipment; (3) the higher ratio necessary between the number of pupil stations and the number of pupils.[14]

These considerations must be kept in mind because communities vary in the extent to which they approach an enriched curriculum; also because they relate to two assumptions upon which this discussion is based. (1) From the standpoint of political expediency,[15] assumptions regarding the type of educational program which the legislature will in the immediate future guarantee should not be based on a curriculum too far in advance of what now obtains in a majority of each new large district's most progressive present component districts. That is, it is proposed that the most progressive present district included in each proposed large district serve as the standard. If the state were divided into 500 larger districts, for example, the standard for each of these larger districts would be the most progressive of the present districts embraced by it. If a substantial majority of these key districts have curricula costing x dollars per pupil, it seems reasonable to assume that the legislature would not accept a plan of guaranteeing a curriculum costing much more than this.[16] (2) It is also assumed that the contemplated building program necessitated by centralizing rural enrollments should be and can be so planned that, as local communities and the legislature become desirous of financing an enriched curriculum, these buildings can be adapted to such a curriculum with as few changes in or additions to the buildings as possible. This may be possible by building rooms to accommodate 40 enrollment pupils but assuming class sizes of only 30 pupils per teacher during the transition period after consolidation. Then, as the enriched curriculum wins acceptance, class sizes can be increased without lowering the quality of instruction and without incurring the displeasure of rural people who are accustomed to having their children in schools where small classes are the rule. This would make available space for special rooms and facilities.[17]

[14]Letter from N. L. Engelhardt, Jr., Acting Director of Research, Board of Education, Newark, N. J., Sept. 24, 1941. This higher ratio is necessitated by shops and laboratory units which may not be used to capacity throughout the day, and to the increased size and facilities of the elementary home room.

[15]That is, from the standpoint of what the legislature can be prevailed upon to enact within the not too remote future.

[16]This would mean of course that the communities with buildings and a curriculum in advance of this minimum would be offered a guarantee of less than what they now desire. The force of this objection may be lessened, however, by the possibility that such communities would be called upon to absorb only a small percentage of the elementary enrollment now in rural schools and by the probability that they are relatively wealthy areas.

[17]Another factor, and it might be an important one, is rural population trends. Any decrease in rural population and school enrollment would make available additional space in buildings constructed in rural communities before such decrease. Of course, the enrollment in urban areas might increase somewhat, throwing a strain on buildings in these areas, but new buildings in such areas could also be aided by the state.

This second assumption is not inconsistent with the first, as it may appear to be at first glance. It is assumed that, from the standpoint of what is politically feasible within the immediate future, the minimum school *program*[18] guaranteed cannot be too far in advance of what prevails today in a substantial majority of the key districts; but that the *buildings* can be so constructed that they can house a modern curriculum without much new construction being necessary, if classes are enlarged to compensate partially for the drop in building utilization due to curriculum enrichment.

Special units—gymnasiums. A second issue is whether or not estimates used in the state aid proposal should contemplate a state guarantee of a minimum which includes merely general instruction units, such as classrooms and study halls, or whether the estimates should be intended to cover the cost of gymnasiums and other special rooms. This issue raises questions involving the type of curriculum and educational philosophy expected to be demanded in the elementary schools throughout the state within the not-too-distant future. If local communities are willing to tax themselves to some extent to provide an enriched elementary school program including such features as physical education, laboratory and shop work, and activity projects, it would seem reasonable that the state's building aid program be based on cost estimates sufficient to provide the kind of building necessary to carry out such a program. On the other hand, if local people are, on the whole, unwilling to vote higher taxes upon themselves to provide such a program, it is arguable that the state is under little obligation to offer it to them.

Gymnasiums and auditoriums are illustrative of this principle. If the prevailing practice is that gymnasiums are used as an integral part of the elementary school program, then it would seem reasonable that estimates upon which the guaranteed cost is based should include a sum per classroom or per pupil sufficient to build and equip a gymnasium, and conversely. Including gymnasiums and auditoriums affects unit costs substantially.[19] Does prevailing practice accept gymnasiums and auditoriums as essential parts of the elementary school plant? In the absence of a survey of building facilities and elementary school practices, this question can be approached only on the basis of tentative assumptions based on the experience of school officials. It is assumed that relatively few elementary schools in Illinois have their own gymnasiums and that this is especially

[18]Which would include current expenses and equipment as well as building costs.

[19]See Tables 6 and 7, pages 65 and 66. For example, in Table 6 the difference in the medians, in the case of construction only was $1,000, which would indicate that the cost of constructing a building with a gymnasium-auditorium would, on the average, be 112 per cent of the cost of constructing it without a gymnasium. In the case of construction and equipment, the corresponding figure is 117 per cent. Using the figures in Table 7 gives an even more pronounced difference—164 per cent in the case of construction and equipment and 127 per cent in the case of construction only. Thus, these figures serve to indicate that an estimate as to the added per-pupil or per-classroom cost for gymnasiums should be somewhere between 112 and 164 per cent of what the cost would otherwise be, with 125 per cent being a defensible conservative estimate.

true in the smaller communities, which must absorb a large portion of the elementary rural enrollment under a reorganization plan involving attendance areas of the type contemplated here.[20] This statement should be qualified by noting that in some of these communities the elementary school uses the gymnasium and auditorium of the high school. In general, however, the use of such facilities could hardly be said to constitute a modern physical education program, especially in the smaller communities. Therefore, it is probably true to say that prevailing practice does not regard gymnasiums as essential parts of the elementary school programs in small communities.

TABLE 4.—ELEMENTARY SCHOOL BUILDINGS IN ILLINOIS CONSTRUCTED UNDER FEDERAL GRANTS FROM 1933 TO 1939, CLASSIFIED ACCORDING TO TYPE OF BUILDING AND POPULATION OF COMMUNITY*

Population	New Buildings		Gym-Auditorium Added to Existing Building
	Without Gym-Auditorium	With Gym-Auditorium	
Under 1,000	4	4	7
1,000–2,500	3	4	4
2,500–5,000	2	6	1
5,000–10,000	3	6	1
10,000–20,000	2	2	0
20,000 and over	4	4	2
Totals	18	26	15

**Allotment for Educational Building Construction,* Federal Works Agency, Public Works Administration, Washington, D.C., 1939.

Examination of the available data on elementary school construction indicates, however, that there may already have started a transition period with respect to construction of elementary school gymnasiums (Table 4). Of 44 elementary school buildings constructed between 1933 and 1939 under Federal grants, 26 were built with gymnasiums, auditoriums, or both, while only 18 were not. The proportion between the two classes of buildings was practically the same in communities under 2,500 as in communities over 10,000. There appeared to be a greater tendency to build with gymnasiums in cities in the 2,500 to 10,000 population groups than in cities under 1,000 or over 10,000. The number of cases is small, and of course does not take into account buildings which were not subsidized by the Federal government, for which no data are available. Nevertheless, the fact that communities of the size that must be counted on to absorb a large share of the elementary rural enrollment built schools

[20] It is estimated that not more than 15 per cent of the elementary pupils in towns over 500 have access to gymnasiums. (Letter from Don Cash Seaton, State Director of Physical Education, October 29, 1941.)

with gymnasiums or auditoriums (or both) more often than not, would seem to be of some significance. Also, a relatively large number of the gymnasiums and auditoriums built as additions to elementary schools were constructed in communities under 2,500. Building elementary schools with auditoriums and gymnasiums did not appear to be confined to the more wealthy communities, there being no significant difference in the median full valuations per pupil between the group of communities building without gymnasiums and the group building with gymnasiums. In interpreting these figures it must be recognized that construction of a gymnasium does not mean that the school possessing it has a modern physical education program; the building may be used chiefly for inter-scholastic contests, and only slight emphasis, if any, may be placed on physical and health education for the entire elementary school enrollment. Nevertheless, the fact that gymnasiums are being built in some small communities not possessing high tax-paying ability seems worthy of consideration, even if it is conceded that some of these gymnasiums represent extravagant catering to community pride which would not be indulged in if the community had to bear the whole cost itself.

The communities which serve as attendance centers in the new larger districts are not similarly situated with respect to gymnasium and auditorium facilities. Discussion will be facilitated if three classes are distinguished: (1) communities where there are at present gymnasium facilities sufficient to accommodate the extra elementary pupils without an addition; (2) communities where there are now gymnasiums but which would require additions to the gymnasiums due to a large increase in the number of elementary pupils to be accommodated; (3) communities where there are no gymnasium facilities available for elementary pupils.

If all the communities of the state were in the first and last classes, a good case could be made for not including an estimate for the cost of gymnasiums in the guaranteed minimum building program, since there is sufficient excess capacity in the first class, and the local community in the last class evidently does not consider a gymnasium as an integral part of the elementary curriculum. If all communities were in the second class, there would be a strong justification for including an estimate for gymnasiums in the guaranteed minimum building program, since such communities evidently consider gymnasiums an essential part of the elementary program, and an influx of additional elementary pupils would mean (1) lowering the quality of the present physical education program, or (2) imposing additional taxes on the taxpayers of the present district having the building, or (3) allowing only the elementary students of the present district with the building to have access to the gymnasium facilities. Any of these solutions would work an injustice on some group of

taxpayers or pupils; therefore, there is a good case for the state subsidizing gymnasium costs, as far as the second class of communities is concerned.

Since there are communities in all three of the classes described, the question as to whether or not the minimum building cost guaranteed should include an estimate for gymnasium facilities cannot be answered dogmatically in the absence of a comprehensive state-wide survey of building facilities and needs. It is resolved tentatively here by excluding the estimate for gymnasiums, on the assumption that situations of the first and third classes outlined above are the more numerous. A second consideration has been the fact that a relatively large attendance center—larger than some of those envisaged here—will be necessary in order to provide a gymnasium at a reasonable per-pupil cost. While a debatable proposition, it is arguable that gymnasium facilities are more urgently needed for the older elementary pupils than for the younger.[21] Changing from a traditional to an enriched curriculum probably will involve a drop in building utilization ratios. The net effect of these considerations is to suggest the possibility of eventually centralizing the elementary school children of junior high school age in the same attendance centers as the secondary school pupils, where the state could later guarantee a building program sufficient to house a reasonably efficient physical and health education program.

Pupil-teacher ratios and utilization ratios. The preceding discussion of the problem of gymnasiums and auditoriums is only part of the larger problem of special rooms, pupil-teacher ratios, and utilization ratios involved in the question of the type of curriculum for which a building must be constructed.

The most reasonable assumption that can be made is that, if consolidation is to come within the not-too-distant future, class sizes should probably be estimated at 30 as a maximum. This does not mean that the local community would not be free to exceed 30 pupils per teacher if desired, but merely that building aid computations should assume such a ratio. Rural patrons would probably object strenuously to having their children put in larger classes, since they are accustomed to thinking in terms of small pupil-teacher ratios; also, it is assumed that estimates regarding the curriculum during the transition period immediately after consolidation should not be made in terms of a program too far in advance of what is prevailing in rural areas and small urban centers; but that buildings should be built to accommodate enriched curricula eventually, insofar as that is possible.

[21] Inspection of elementary health and physical education programs required for recognition indicates that many of the activities recommended for the younger elementary children can be carried on in recreation rooms which may be obtained by remodeling classrooms. *Cf. Health and Education Syllabus* (Office of State Superintendent of Public Instruction), pp. 98-99, 156 ff.

The latter problem is complicated by the fact that building utilization ratios may be lower in schools with an enriched curriculum than in schools with a traditional curriculum.[22] How can buildings constructed to house traditional curricula be adapted to enriched curricula, in the light of this fact?[23] It is suggested that this problem may be dealt with by (1) providing for fairly small pupil-teacher ratios during the transition period—probably 30 per teacher; (2) building classrooms to accommodate more pupils than this—probably 40;[24] (3) increasing class sizes as the utilization ratio drops. For example, if a new building were needed to house 240 elementary children now in one- and two-room schools, a building with eight classrooms would be required in order to maintain a pupil-teacher ratio of 30 to 1. As the enriched curriculum gained acceptance, the class size could be increased to 40, on the assumption that a class of 40 in a school with a modern curriculum provides a more satisfactory education than a class of 30 where the curriculum is more traditional, and on the assumption that school patrons could be brought to realize this. Increasing the class size would thus compensate—partially at least—for the drop in the utilization ratio. Taking the example of the 240 pupils, if it were desired to use two rooms for special rooms, the other six rooms would

[22]Letter from N. L. Engelhardt, Jr., Director of Research, Board of Education, Newark, N. J., September 24, 1941. By an "enriched" curriculum is meant one providing for work in laboratories and other special rooms, projects and learning situations using the facilities and resources of the local community, and in general learning situations involving real life activities. By "utilization ratio" is meant the relationship between the enrollment and the number of pupil stations (sittings, places at a table or laboratory, or allocated space of a floor). The ratio is ordinarily less than 100% because of such factors as failure to use a room during all periods of a day, and failure of class sizes to be up to the minimum permitted in the system. This tendency is greater in the case of some special rooms than in the case of classrooms. The U. S. Office of Education studied the building utilization of four types of schools. A *Usual* type school was one defined as (1) one in which one teacher teaches all subjects in one room to one grade or section within a grade and (2) in which there are no special rooms. A *Usual-With-Variations* type was defined as one in which one teacher teaches one grade in one room but takes pupils to special rooms for special subjects. The *Platoon* school was defined as one in which the entire school is divided into two groups or platoons, one of which uses the home rooms while the other uses special rooms, the gymnasium, or the playground. An *Activity Program* school was defined as one in which all subjects are taught by one teacher in one room but in which projects are carried on in space at the front or the back of the room devoted to work-benches, art material, and science equipment. The *Activity Program* school thus demands a classroom larger than the *Usual* type school. Utilization was found to be higher in the *Platoon* type than in the *Usual* type because in the former type special facilities were used every period of the day, while in the second type they are idle for certain periods. The *Usual-With-Variations* type was found to have a lower utilization ratio than the *Usual* type, since special rooms are not utilized every period of the day. The *Activity* type school was found to have about the same utilization as the *Usual* type since it had no special rooms, but it necessitated a larger classroom. "For example, a building with 12 rooms, an auditorium, and a gymnasium under the *Usual* or *Activity Program* types of school organization accommodated 12 classes; under the *Usual-With-Variations* type, 10 classes; and under the *Platoon* type, 14 or 16 classes. It is obvious, therefore, that the number of cubic feet per pupil in a 12-room building and corresponding per pupil costs would differ greatly according to the type of organization. . . ." *Functional Planning of Elementary School Buildings* (U. S. Office of Education Bulletin, 1936, No. 10), pp. 6, 32, 46.

[23]On the question of building utilization, see also N. L. Engelhardt and Fred Engelhardt, *Public School Business Administration* (1927), pp. 348 ff.; E. L. Morphet, *The Measurement and Interpretation of School Building Utilization* (1927); George F. Womrath, *Efficient Business Administration of Public Schools* (1932), p. 40; *First Report of the Joint Legislative Committee to Investigate Procedures and Methods of Allocating State Moneys for Public School Purposes. . . .* (State of New York, Legislative Document, 1941, No. 54), p. 45.

[24]This is the standard size. *Cf. Allotments for Educational Building Construction* (Public Works Administration, Federal Works Agency, 1939). That is, classrooms should be built large enough to accommodate 40 pupils even if the utilization ratio were less than 100%.

accommodate the enrollment if the class size were increased to 40. By building the classrooms large enough to permit the room to be used under an activity program plan, class sizes could be left at 30. A second factor which would tend to offset drops in building utilization ratios would be a decrease in enrollment in some attendance centers where population had declined. Where population increased, new facilities would be necessitated. Where these two factors—increasing pupil-teacher ratios and population decline—do not suffice to compensate for decreases in building utilization ratios, new construction would perhaps be most desirable in the attendance centers in which the secondary school pupils are educated, elementary pupils of junior high school age being centralized in the large attendance centers in sufficient number to make room for the younger elementary pupils in the smaller attendance centers where the new curriculum is being installed.

Choice of a Cost Unit

The cost units used in this study are the classroom and the enrollment pupil. These units are open to certain objections, as would be almost any unit adopted. For example, the per-pupil cost will be affected by the building utilization ratio. The per-classroom cost will be affected by the proportion of space allotted to units other than general instructional units. More accurate standards exist for comparing the costs of individual buildings, such as cost per cubic foot, or cost per cubic foot of building secured for every square foot of shell area.[25] The classroom and enrollment pupil are used in this study for the sake of simplicity and because, for the purpose of making estimates relating to school buildings generally, these units would seem to be valid, providing those who use them are clear as to what are their assumptions as to such matters as class size, type of curriculum, and building utilization ratios.

Variable Factors

Estimates as to what is a reasonable unit cost can be formed only upon the basis of studies of costs of buildings constructed. In such studies, and in interpretation of their results, it must be kept in mind that there are several variable factors which may affect the cost of a building.

Building costs vary from time to time, as a result of trends in material costs and wage rates. Some conception of the extent to which this factor influences building costs generally can be gained from an inspection of building cost indices. For example, it is possible that a building constructed

[25] On cost units generally, see A. B. Moehlman, "Theory of School Plant Costs," in G. M. Whipple, ed., *The Planning and Construction of School Buildings* (33rd Yearbook of the National Society for the Study of Education, Pt. I, 1934), pp. 300 ff.; N. L. Engelhardt and Fred Engelhardt, *Planning School Building Programs* (1930), pp. 388 ff.; N. L. Engelhardt, Jr., *School Building Costs* (1930), esp. Chapter II.

in 1933 might cost 20 or 25 per cent more a few years later. At any given time building costs will vary from place to place within the same state due to such factors as varying distances from the place where materials must be bought, differences in freight rates, and differences in the degree of unionization. For example, in 1938-39 building costs for brick farm houses as computed by the Illinois Tax Commission were on the average 20 to 25 per cent higher in high cost counties than in low cost counties.[26] These figures are especially impressive when it is recalled that they are based on averages and that the differences between the ten highest cost counties and the ten lowest cost counties would be even more striking. Another factor which will affect unit costs is the number and type of the items included in the total estimated cost of a project. For example, some estimated total costs will include land and landscaping, while others will not. Still other factors are the educational philosophy of the planner of the building and the type of curriculum which the building is to house; the type of materials and style of construction; and the efficiency with which the enclosed space is allocated and used.[27]

Illinois School Building Costs between 1933 and 1939

Costs of school buildings built in Illinois under Federal grants between 1933 and 1939 were analyzed for the purpose of making estimates of unit costs. The method employed was as follows:

From a list of Federal educational building projects in Illinois during this period[28] were selected all elementary school building projects which did not involve repairs to existing buildings. The total cost, as estimated by Federal officials, was then converted into what the cost could have been under 1939-40 conditions. This adjustment was made on the basis of cost indices which were developed for buildings other than school buildings, no index of school building costs for Illinois being available. Therefore, the adjusted costs must be interpreted only as rough approximations. An index relating specifically to school building costs might have given slightly different results, since the proportions between the various types of materials used in school building construction are somewhat different from the proportions existing in the case of the buildings which formed the bases for the indices used.[29] Use of an index based on Illinois build-

[26] *Illinois Assessors' Manual*, 1939 (Illinois Tax Commission), p. 140.

[27] On this latter point see N. L. Engelhardt, Jr., *School Building Costs* (1930), *passim*.

[28] *Allotments for Educational Building Construction* (Public Works Administration, Federal Works Agency, 1939).

[29] See N. L. Engelhardt, Jr., *School Building Costs*, pp. 25 ff. A building cost index was developed in his study, but it related only to New York conditions. For a time building indices based on U. S. averages were published. *Cf.* 5 *Nation's Schools* (1930), No. 2, pp. 86-90; No. 3, pp. 71-73; 40 *School Executives Magazine* (1929), pp. 102, 133, 196; 48 *ibid.* (1929), pp. 203-204, 262, 311, 358, 404, 450, 500, 549; 48 *American Educational Digest* (1928), pp. 156-157; 62 *American School Board Journal* (1921), pp. 37-38. Also see Engelhardt and Engelhardt, *Planning School Building Programs* (1930), pp. 396, 431. These indices have not, however, been kept up to date. (Letter from Professor N. L. Engelhardt, Teachers' College, Columbia, September 23, 1941.)

ing cost conditions generally does, however, provide a rough means of making the desired adjustments.[30]

The Boeckh index was chosen in preference to the building cost index maintained by *Engineering News-Record* for the reason that the latter is based on U. S. averages, while the former is based on cost conditions in the St. Louis and Chicago areas.[31] A minor consideration was the fact that use of the Boeckh index would not involve, ordinarily, as much of a change from the original cost figures as the *Engineering News-Record* index, and it was considered desirable to risk understating the amount of change rather than overstating it.[32] The index finally used was a composite of four Boeckh indices, each of which was established for a different type of building. The indices for each year for these four building types were averaged to obtain the index numbers for the Boeckh index appearing in Table 5, on the ground that school buildings embody features and construction problems similar to those found in the four types.[33] While the resulting index is not as defensible as an index developed especially for Illinois school buildings, it is more defensible than an index for any one of the four types of buildings or an index based on Dow-Jones averages or on average building costs for the country as a whole.

After the total cost was adjusted to 1939-40 conditions, the per-classroom cost was calculated.[34] These per-classroom costs were then classified according to various criteria. For example, separate classifications were established for high cost, low cost, and average cost counties.[35] Of the various measures of central tendency, the median classroom cost was selected as the typical cost (Table 6). The principal consideration dictating this choice was that this measure of central tendency is affected less by cases at the extremes of the array than is a mean.

Calculations based on the same basic data have been made by Mr. A. D. Manvel, Director of Research, Illinois Agricultural Association, and

[30]In a recent New York study such adjustments were even made on the basis of Dow-Jones averages. *First Report of the Joint Legislative Committee to Investigate Procedures and Methods of Allocating State Moneys for Public School Purposes. . . .* Leg. Doc., 1941, No. 54), p. 43.

[31]126 *Engineering News-Record* (April 24, 1941), pp. 100-101.

[32]The index numbers are given in Table 5 so that the method used in determining unit costs for this study will be clear, and also in order that the study will be useful in the future, even though cost conditions may be different from those obtaining at the date of writing. For example, if a composite Boeckh index, such as the one used here, for the Chicago area stands at 150 in 1945, the per-pupil and per-classroom costs used here should be increased one-fifth. (150 — 125 is 25. 25 is one-fifth of 125.) Or, if a given building in this area were built in 1936, consulting Table 5 would show that it would cost 1.37 times as much in 1945. (150 ÷ 110 is 1.37.)

[33]The choice of the four types was based on the advice of C. E. Palmer, Professor of Architectural Engineering, University of Illinois.

[34]Although unit costs in terms of dollars per enrollment pupil were desired for use in this study, per-classroom costs were first calculated in order to have costs expressed in units as nearly comparable to Illinois Agricultural Association data as possible. Per-pupil costs were then calculated by dividing a given per-classroom cost by 30.

[35]Counties were classified as to cost conditions on the basis of farm building unit costs calculated by the Illinois Tax Commission in 1930. *Cf. Illinois Assessors' Manual,* 1939 (Illinois Tax Commission), p. 148.

TABLE 5.—BUILDING COST INDICES*

Year	Average of Four Boeckh Indices†		ENR Index‡
	Chicago Area	St. Louis Area	
1926-29	112.5	109.0	.....
1933	.....	98.4	79.0
1934	.....	106.3	89.0
1935	103.5	104.4	88.5
1936	110.0	104.6	92.0
1937	116.0	114.7	104.5
1938	122.3	119.5	105.0
1939	123.0	118.5	105.0
1940	125.0	118.7	108.3

*Based on indices given in "Construction Costs" issue of *Engineering News Record*, April 24, 1941, pp. 104 ff.

†Simple average of indices for four types of building: (1) apartments, hotels, and office buildings—brick and concrete; (2) same—brick and steel; (3) commercial and factory buildings—brick and steel; (4) same—brick and concrete. United States averages for 1926-29 equal 100 for the individual indices.

‡As given in the *Engineering News Record*, 1913 is 100. As given here, 1926-29 is 100.

TABLE 6.—MEDIAN COST PER CLASSROOM OF ELEMENTARY SCHOOL BUILDINGS CONSTRUCTED IN ILLINOIS UNDER FEDERAL GRANTS FROM 1933 TO 1939, CLASSIFIED BY COST CONDITIONS AND NATURE OF PROJECT
(Cook and St. Clair Counties excluded)*

Costs Included in Project	Number of Buildings	Median Cost per Classroom†
Construction only:		
High cost counties	15[a]	$11,500
Low cost counties	7[b]	8,200
Average cost counties	16[c]	8,500
Construction and equipment:		
High cost counties	9[d]	14,000
Low cost counties	..[e]	.....
Average cost counties	11[e]	13,500
Construction only:		
Buildings with instructional units only	22[f]	8,500
Buildings with auditorium, gym, or both	14[f]	9,500
Construction and equipment:		
Buildings with instructional units only	13[g]	12,800
Buildings with auditorium, gym, or both	10[h]	15,000

*Source: *Allotments for Educational Building Construction, 1933-1939* (Public Works Administration, Federal Works Agency, Washington, D.C., 1939).

†Adjusted to 1939-40 building costs.

[a]For six buildings the estimated cost included items which may be designated as "extra costs"—e.g., demolition of an existing building, land, special rooms.

[b]Extra costs in one case. Six of the buildings are in Madison County.

[c]Extra costs in three cases.

[d]Extra costs in five cases.

[e]Only two cases.

[f]Extra costs in six cases.

[g]Extra costs in eight cases.

[h]Extra costs in two cases.

TABLE 7.—AVERAGE COST PER CLASSROOM OF ELEMENTARY SCHOOL BUILDINGS CONSTRUCTED IN ILLINOIS UNDER FEDERAL GRANTS FROM 1933 TO 1939, CLASSIFIED BY URBAN DENSITY AND NATURE OF PROJECT*

Costs Included in Project	Number of Buildings	Number of Class-rooms	Classrooms per Building	Average Cost per Classroom
Construction, equipment, and land:				
15 urban counties	5	20	4.0	$15,500
87 other counties	1	9	9.0	17,000
State	6	29	4.8	15,900
Construction and equipment:				
15 urban counties	7	51	7.3	14,900
87 other counties	11	85	7.7	11,600
State	18	136	7.6	12,900
Construction and land:				
15 urban counties	1	6	6.0	19,700
87 other counties	2	10	5.0	6,600
State	3	16	5.3	11,500
Construction only:				
15 urban counties	17	117	6.9	12,700
87 other counties	14	96	6.9	8,200
State	31	213	6.9	10,700
Total:				
15 urban counties	30	194	6.5	13,800
87 other counties	28	200	7.1	10,000
State	58	394	6.8	11,900
Construction and equipment, including:				
Gym, auditorium, or both	6	29	4.8	15,900
Land	11	96	8.7	14,300
Other costs	4	22	5.5	9,000
No mentioned special costs	3	18	6.0	9,700
Sub-total	(24)	(165)	6.9	13,400
Construction only, including:				
Gym, auditorium, or both	20	165	8.3	11,700
Land	2	10	5.0	6,600
Other costs	4	11	2.8	6,800
No mentioned special costs	8	43	5.4	9,200
Sub-total	(34)	(229)	6.7	10,800
Total	58	394	6.8	11,900

*Courtesy of Illinois Agricultural Association. These data were computed by Allen Manvel, Director of Research, and are based on *Allotments for Educational Building Construction, 1933-39* (Public Works Administration, Federal Works Agency, Washington, D.C.). "Urban" counties are those which in 1940 had at least 60% urban population.

are presented in Tables 7 and 8 for purposes of comparison. These two sets of calculations, although the results of different approaches, tend to supplement and corroborate each other, especially when the differences in method are considered. The chief differences are:

(1) The writer's calculations excluded buildings in Cook and St. Clair counties. The former county was excluded because the large number of buildings and relatively high costs in this county would tend to exert a rather strong influence on even median costs;[36] the latter was excluded

[36]That is, what is desired are unit costs which may be considered adequate for downstate, since the problem of rehousing rural elementary pupils is chiefly a downstate problem.

TABLE 8.—COSTS OF ELEMENTARY SCHOOL BUILDINGS CONSTRUCTED IN ILLINOIS UNDER FEDERAL GRANTS FROM 1933 TO 1939, CLASSIFIED BY AREAS AND URBAN DENSITY*

	15 Urban Counties	22 Southern Counties	65 Other Counties	State
Number of school buildings	30.0	3.0	25.0	58.0
Number of classrooms	194.0	16.0	184.0	394.0
Average number of classrooms per building	6.5	5.3	7.4	6.8
Cost per classroom ($000):				
Average	13.8	9.8	10.0	11.9
Median school building	12.0	na	8.7	10.6
Median school room	14.6	na	9.3	11.4

*Courtesy of Illinois Agricultural Association. These data were computed by Allen D. Manvel, Director of Research, and are based on *Allotments for Educational Building Construction, 1933-39* (Public Works Administration, Federal Works Agency, Washington, D.C.). "Urban" counties are those which in 1940 had at least 60% urban population.

because building costs in that county were not investigated by the Tax Commission. The Association's sample included buildings in these counties.

(2) The Association's high cost group was made up of fifteen urban counties. In other words, urbanization was assumed to be an index of cost conditions. The writer's high cost group contained 21 counties, which group contained some but not all of the urban counties and some non-urban counties as well. On the other hand, some of the urban counties appeared in the writer's low cost group. In other words, the assumption underlying the writer's classification according to intrastate cost conditions is that school building costs vary from place to place within the state much as do farm building costs.

(3) The Association's classifications as to type of construction and nature of the project are more detailed than the writer's.

(4) In some of the Association's calculations, measures of central tendency different from the one used by the writer were employed.

(5) The Association's calculations were based on unadjusted costs, while those of the writer were based on original costs as corrected for price trends.

A word of caution should be voiced regarding the interpretation of both sets of calculations. As has been pointed out, many variable factors influence the total unit costs. With the data available it is impossible to classify the buildings into enough classes to hold many of the variable factors constant at the same time. If that is done, the number of cases in each classification becomes so small that generalization from them is hazardous. Since the number of classifications must be limited in order to have a large enough number of cases in any given category, differences in per-classroom costs may be affected by factors other than the one

sought to be isolated. The higher per-classroom costs in high cost counties may be interpreted as due in part to differences in cost conditions, but it may also be partially due to differences in the type of buildings constructed. It may be that people in the high cost communities demand better buildings than do people in lower cost areas.

Choosing a definite figure as the sum which the state should guarantee raises problems of whether intrastate variation in cost conditions should be taken into consideration as well as price trends,[37] and whether the state should guarantee only a sum sufficient to construct instructional units or should include an allowance for gymnasiums or other special units. Using 1939-40 conditions and average cost counties as a standard, it

TABLE 9.—VALUE OF ELEMENTARY SCHOOL PROPERTY IN ILLINOIS, 1939*

Population Group	Enrollment	Value of School Properties	Value per Enrollment Pupil
1,000–2,500	50,276	$ 14,616,553	$292
2,500–5,000	42,692	12,929,024	303
5,000–10,000	55,329	19,740,851	358
10,000–20,000	50,288	21,168,898	421
Over 20,000	489,965	210,781,737	430
Total	688,550	279,237,063	406

Statistical Report of Superintendent of Public Instruction, 1939, pp. 130, 134, 136, 137, 138.

can be argued that, if the state had had a building aid program at that time which contemplated a guarantee of both construction and equipment cost, the guarantee should have been not less than $10,000 a classroom or $333 per pupil, assuming no allowance for gymnasiums; and that if an allowance had been included for gymnasiums and other costs, a guarantee of $15,000 per classroom would probably be reasonable.[38]

[37]The New York building aids law provides that the $450 guarantee be adjusted quarterly in the light of indices established by the Industrial Commission, but makes no provision for adjustment for intrastate variation in cost conditions. *Cahill's Consolidated Laws, 1941 Supp.*, c. 15, sec. 185. It would seem not outside the bounds of administrative feasibility to provide for a district's guarantee to be adjusted by indices established to reflect variation in cost conditions from place to place within the state. The injustice resulting from guaranteeing the same sum to all areas of the state, with no adjustment for local cost conditions, would be alleviated, although not eliminated, to the extent that local taxpaying ability varied directly with building costs. There is some indication that, as a group, the high cost counties have more taxpaying ability than the low cost counties, although there are some exceptions.

[38]In making grants for buildings in rural areas, Federal officials estimated the cost on a basis of $10,000 per classroom. (Letter from Julius R. Hall, Assistant Regional Director, Public Works Administration, July 31, 1941.) This figure may be higher than the actual cost of buildings constructed without Federal aid. An architect with some experience in school building construction (and who has requested that his name not be used) has stated orally to the writer that Federal cost data is high, and that elementary school buildings, equipped, can be built for $6,000 a classroom. Although several instances were found where the per-classroom cost under Federal projects was this low or lower, an estimate this low probably should not be used as a basis for state aid, since the costs on which it was based may have been only a part of those which may be necessary to incur in a new building project. For instance, it may ignore cost of land. Also, there is some

Evidence corroborative of the reasonableness of a guarantee of an amount somewhere between $333 and $400 per pupil is offered by the value of school property per enrollment pupil (Table 9). In urban centers of 1,000 to 5,000 population, the value of school property per elementary enrollment pupil is approximately $300. These figures also indicate that, since value per enrollment tends to vary directly with the size of the community, values per enrollment in centers of less than 1,000 population are less than $300. Since centers under 5,000 may be expected to absorb a large share of the rural elementary enrollment, there is considerable justification for adopting a guarantee figure at, or slightly above, the average for these communities.

The Local Contribution

The determination of what would be a proper local contribution as a condition for participation in the state's building aid fund will depend to some extent on certain working hypotheses and assumptions which it seems most reasonable to adopt. As has been suggested, it is assumed that full value, not merely assessed value, should be used as the index of tax-paying ability, in order for the system to be as equitable as possible. It is likewise assumed that the district will have to bond itself for its share of the cost.[39] Another assumption is that the required contribution should not be set so high that many needy larger districts would be precluded from qualifying for building aid due to the required contribution being greater than the amount for which it can bond itself under its existing assessment practices. Finally, the following analysis is based on the assumption that the relatively wide variation in assessment ratios throughout the state will persist for some time to come, and that school consolidation will have to be brought about within the pattern of existing assessment practices. It is possible that future events will prove this latter assumption untenable, as more uniform assessments may come about.[40] To make a program of school reorganization and consolidation contingent on reform of local assessment administration would, however, make a difficult problem still more difficult.

The net effect of these assumptions is to impose an upper limit on what can be expected from the localities as their contribution. This is because

justification for thinking in terms of Federal cost data, even though it may be high, on the assumption that many building programs in the future will be carried on under them, and on the assumption that a state aid program might also tend to increase unit costs.

[39]Accumulation of surpluses and a pay-as-you-go policy are not to be ruled out as possibilities, but bonding is assumed to be the method that will be used in the great majority of cases. Also, there is the possibility of using holding companies to circumvent debt limits. Such action has been upheld by the courts in cases where there was no legal obligation (as distinguished from economic expediency) to renew the contract from year to year or eventually to purchase the building.

[40]For example, it has been proposed that full-time property tax supervisors be provided in each county of 40,000 population or more, and that employment of such an official in the smaller counties be made optional. *Cf. First Report of Governor Dwight H. Green's Advisory Committee on Taxation,* April 22, 1941, p. 38.

the constitutional debt limit is 5 per cent of the assessed value,[41] and assessment ratios vary widely throughout the state. For example, county average assessment ratios vary from 25 to 75 per cent.[42] Ratios for areas the size of proposed larger districts would probably vary even more, assuming that the new districts were smaller than the counties.[43] Ratios for some urban areas run as low as 20 per cent or lower (Table 10). The combined effect of the four assumptions outlined above is to impose an upper limit on the local contribution, which upper limit will be determined by debt limits expressed in full valuations. For example, where the assessment ratio is 40 per cent, the constitutional debt limit, in terms of *full* valuation, is two per cent of full value. If a local contribution of two

TABLE 10.—ASSESSMENT RATIOS OF MUNICIPALITIES AND URBAN TOWNSHIPS, 1939*
(Cook County Not Included)

Ratio (per cent) of Assessment to Full Valuation	Number of Municipalities and Townships†	Cumulative Total	Ratio (per cent) of Assessment to Full Valuation	Number of Municipalities and Townships†	Cumulative Total
10-15	1	1	40-45	16	100
15-20	7	8	45-50	9	109
20-25	9	17	50-55	7	116
25-30	20	37	55-60	1	117
30-35	29	66	60-65	1	118
35-40	18	84	65-70	3	121

**Tax Rate Limits and Assessment Ratios, 1925-1940* (Illinois Tax Commission), pp. 113 ff.
†Some ratios were for two or more townships combined.

per cent of full value were to be required, no area where the assessment ratios were less than 40 per cent would qualify for state building aid, assuming present assessing practices, since the local contribution required would exceed the district's bonding capacity. There are a few areas in the state where the assessment ratio was less than 20 per cent in 1939, but only one where it was less than fifteen per cent (Table 10). If it were desired to set the contribution requirement low enough to make it possible for areas with ratios as low as 15 per cent to qualify, the contribution would have to be set at .75 of one per cent. Thus, the rate of contribution finally determined will probably lie somewhere between the two limits (.75 of one per cent and two per cent).

Some of the considerations involved in the determination of the exact

[41]Art. IX, sec. 12.
[42]*Tax Rate Limits and Assessment Ratios*, 1925-40 (Illinois Tax Commission), pp. 1, 14.
[43]That is, there would be areas within each county both above and below the county average. The range between the lowest and highest *district* assessment ratio would thus be even greater than in the case of the county averages.

figure may be pointed out. In 1939, 65 per cent of the enrollment in one-room elementary schools was in counties in which the county average assessment ratio was 40 per cent or more; 89 per cent was in counties where the average ratio was 35 per cent or more; and 96 per cent was in counties where the average ratio was 30 per cent or more.[44] Thus, if the county average ratio were to determine a district's full valuation, setting the contribution at two per cent of full valuation would include counties with 65 per cent of the children in one-room schools; setting the contribution at 1.75 per cent would include counties with 89 per cent of the children in one-room schools; and setting it at 1.5 per cent would include counties with 96 per cent of such children. The above figures suggest that the figure finally determined upon might justifiably be toward the upper limit (two per cent), since the lower the contribution is set the more costly the program would be to the state, and relatively few additional one-room school children would be included.

There are certain suppositions implicit in the above analysis, however, that need further examination. (1) In the first place, if separate assessment ratios for the proposed larger districts were established and used instead of the county average ratio in calculating full values, the required contribution would probably have to be lower than indicated above, since several of the district ratios in a county might be considerably below the county average. (2) Thus far the limit to what a given district could contribute has been assumed to be its constitutional debt limit in terms of full value. There is a strong justification for the argument that estimates for a building aid program should not be based on the maximum bonding power of the various districts. To do so would leave it no bonding "leeway" to exceed the minimum program if the local people so desired. These considerations argue that the local contribution might justifiably be set at a point relatively near to the lower limit mentioned above (.75 of one per cent)—or possibly even below it. (3) Also, the analysis in the preceding paragraph does not take into account the fact that some districts already have bonded indebtedness.

The data are at present lacking for a more precise and scientific determination of a reasonable local contribution. An accurate estimate would depend on the number and size of the proposed larger districts, their enrollment, their relative taxpaying ability, and the past building programs of their component districts. Until these data are available, it will not be possible to apply the techniques which have been worked out for developing equalization formulae.[45]

[44]Computed from assessment ratios in *Tax Rate Limits and Assessment Ratios*, 1925-40 (Illinois Tax Commission), p. 14, and enrollment figures in *Statistical Report of Superintendent of Public Instruction*, 1930, pp. 8-9.

[45]For example, developing an equalization formula involves, among other things, calculating taxpaying ability in terms of per-pupil (full) valuations, the investigation of the costs of building

The problem of existing indebtedness. An issue which complicates the problem of a state equalization grant for building purposes is the treatment of existing indebtedness. Where there is existing indebtedness for facilities of a present district which are to be used by the new proposed larger district, it can be argued that equity demands that the state assume a part of this indebtedness, if it exceeds a certain per cent of full value. There seems to be no good reason, from the standpoint of justice, for the state to guarantee a future building program in one area while refusing to aid in a building program in another area just because it has been completed in the past.[46] This would seem to be an impossibility in Illinois, however, due to the constitutional prohibition against the state's assuming any indebtedness contracted by a local unit of government.[47]

A second problem relating to present indebtedness exists in areas which would need new facilities to accommodate centralized rural enrollments, but which already have considerable indebtedness. Allowing such areas to deduct their indebtedness[48] from the required contribution would be desirable from the standpoint of justice, but might also be attacked on the ground that it in effect would amount to the state's assuming or becoming responsible for the debt.[49] Allowing no such deduction would not entirely dispose of the problem, from the standpoint of wording a building aids program so that virtually all areas of the state could qualify under it. This is because some areas already have considerable school indebtedness.[50] If an independent high school district with indebtedness were to be converted into a twelve-grade district, it might not be able to raise the required local contribution and still stay within its debt limit.[51] The difficulty perhaps

programs of a group of districts of average taxpaying ability, and calculating what tax rate would be necessary to pay for the minimum program so determined in the wealthiest district or group of districts. For a good description of these techniques, see Gerald M. Weller, *State Equalization of Capital Outlays for Public School Buildings* (unpublished doctor's dissertation, University of Southern California, 1935), pp. 142 ff. and sources cited. For the technique for determining the qualifying rate in equalization programs generally, *cf.* Paul R. Mort and W. C. Reusser, *Public School Finance* (1940), pp. 442 ff.

[46]See *An Improved System of State School Finance for New York State* (Committee on State Aid, Educational Conference Board of New York State, Albany, N. Y., 1940), p. 32.

[47]"The State shall never pay, assume or become responsible for the debts or liabilities of, or in any manner give, loan or extend its credit to or in aid of any public or other corporation, association, or individual." Art. IV, sec. 20.

[48]Perhaps the amount so deducted should be limited to a certain sum per pupil.

[49]Art. IV, sec. 20, quoted *supra*. It would seem arguable, however, in defense of such a provision, that the state would not be responsible for the bonds, and that, where the state has authority over the public school system, it has power to spend money on it. *Cf. Mitchell* v. *Lowden*, 288 Ill. 327, 123 N. E. 566 (1919), and *Martens* v. *Brady*, 264 Ill. 178, 106 N. E. 266 (1914).

[50]In 1930 the median ratio between debt and assessed valuation for downstate was 1.03 per cent in the case of elementary school districts and 1.50 per cent in the case of high school districts. *Bonded Indebtedness of Local Governments, 1927-1940* (Illinois Tax Commission), pp. 53-54. In the light of these facts, the local contribution would have to be relatively low. These medians are, however, based only on the number of districts having indebtedness. In 1930, only 809 of the 11,430 common school districts and only 376 of the 600 high school districts had indebtedness. If the indebtedness of each class of districts were divided by the assessed valuation of each class of district, the ratios of debt to value would be lower.

[51]It is assumed that the present high school district boundaries will be followed, in many cases, in mapping community school taxing units to administer twelve grades.

could not be entirely avoided by relying on the principle that the debt limit applies to each borrowing government and by making the new twelve-grade district a municipal corporation separate and distinct from the old high school district, in the light of the ruling that, where high and elementary boards exercise jurisdiction over exactly the same territory, the constitutional limit for school purposes is still only five per cent, as it would be in the case of any twelve-grade district.[52] In this case there were not two separate and distinct municipal corporations.[53] Nevertheless, the argument might be effectively made against two coterminous school districts.[54] The objection might be extended to situations where the new district was not exactly coterminous with a former district;[55] the differences in boundaries might have to be substantial before the courts would allow the new unit to bond itself up to the full five per cent without regard to other school indebtedness previously contracted in that area.[56] In the light of these problems, it may well be that a building aid law should be drafted excluding provisions intended to allow districts with a substantial proportion of their bonding capacity used up to qualify for building aid. The reasoning behind such a treatment would be that consolidation may be expected to be a long-time, gradual process; that some areas will lag behind other areas; and that building aid inducements can be expected to apply to areas barred from qualifying for it as a result of indebtedness as soon as such areas reduce their existing indebtedness to a point where they could raise the local contribution within their debt limit.

The measure of need. A second issue involved in the problem of building aids to induce consolidation is the question of the treatment of the fraction of the total enrollment for which new facilities are needed as a result of consolidation. This can be best explained by recourse to an example. Assume a proposed large district of $1,000,000 valuation, an assessment ratio of 33 per cent, and 400 students. Assume that present facilities in the urban area will take care of 200 and that new buildings to accommodate 200 would be needed if the rural enrollment were cen-

[52]*Board of Education* v. *Upham*, 357 Ill. 263, 191 N. E. 876 (1934). *Wilson* v. *Board of Trustees*, 133 Ill. 443, 27 N. E. 203 (1890). *Bonded Indebtedness of Illinois Local Government* (Illinois Tax Commission), p. 131.

[53]*Russell* v. *High School Board*, 212 Ill. 327, 72 N. E. 441 (1904); discussed and distinguished in *Fiedler* v. *Eckfeldt*, 335 Ill. 11, 166 N. E. 505 (1929).

[54]It has, however, been held that, where a school district is exactly coterminous with a city, the district is a separate corporation and has its own debt limit, unaffected by the city's debt limit. *Board of Education* v. *Upham*, 357 Ill. 263, 191 N. E. 876 (1934).

[55]In the case of a sanitary district not exactly coterminous with a city, however, the constitutional debt limit applies to each corporation singly. *Wilson* v. *Board of Trustees*, 133 Ill. 443, 27 N. E. 203 (1890). If the differences in boundaries were great enough, it might be possible to invoke the rule that the constitutional limit does not mean that no territory or property included within two or more school districts can become liable for school indebtedness exceeding the limit. *Cf. Fiedler* v. *Eckfeldt*, *supra*.

[56]That is, the courts might refuse to follow *Board of Education* v. *Upham*, *supra*, since in the case of school districts, the indebtedness would be all for one governmental function; and it might be difficult to invoke reasoning similar to that employed in *Wilson* v. *Board of Trustees*, if the difference between the boundaries were only slight.

tralized. Let A = state building aid; U = guaranteed unit cost of housing a student; r = the local contribution as a per cent of full value; and V = full value.

The possible methods for drafting the formula are as follows:

$$(1)\ A = 400U - rV \qquad (2)\ A = 200U - rV \qquad (3)\ A = \frac{400U - rV}{400U} \cdot 200U .$$

In the first formula the amount of state aid is based on the total enrollment of the school district; in the second, it is based on the number of pupils for which new housing is needed; in the third formula, the amount of state aid is a function of both the total enrollment and the number for which new housing is needed.[57]

The first formula is open to the objection that districts with similar valuations and total enrollments might have different proportions between the number of students for which housing facilities already exist and the number of students for which new housing is needed. For example, in a similar district, housing facilities might exist for 300 students, with new housing necessary for only 100. In another the proportions might be reversed. Use of the first formula would favor the district where the ratio was 300 to 100 and work to the detriment of the district where the ratio was 100 to 300. In the first case (where the ratio is 300 to 100) the result might be an inducement to excessive building; in the second case (where the ratio is 100 to 300) the aid might be inadequate in the light of housing needs made necessary by consolidation.

The second formula (A = 200U − rV) would result in some districts not being able to claim building aid, or being able to claim such a small amount of aid that it might not be a sufficient inducement to construct new buildings. In this class would fall districts whose taxpaying ability was relatively high and whose proportion of "unhoused" to "housed" enrollment was relatively low. For example, if a new large district were to centralize 100 rural children in an urban center in which there are already enrolled and housed 1,000 children, it might be entitled to only a slight amount of aid, or perhaps none at all.

While the third formula might result in some fairly wealthy districts failing to qualify for aid unless the required contribution were set rather low, it is, in comparison to the other two, the most desirable, since it is more free from the defects pointed out in connection with the other two.

Deduction for present unused capacity. Another issue involved in

[57]The third formula, which is the one embodied in the New York building aid law (*Cahill's Consolidated Laws, 1941 Supp.*, c. 15, sec. 185), gives the same ratio of state aid to the local contribution as the first formula. The amount, however, will depend on the proportion between "housed" and "unhoused" enrollment.

drafting a building aid proposal is the problem of whether or not, in measuring new housing need, to deduct present unused building capacity from the number of rural pupils to be centralized. If this is done, it might be argued that the urban district with the unused capacity has paid for facilities to be used by rural children from areas which have not borne taxes to pay for those facilities, and that this is unjust to the urban area. It might be argued also that the state should base its state aid computations on the full number of rural children centralized, leaving to the local community the question of how much existing buildings should absorb rural enrollment. In answer to this it might be said that it will be impossible to achieve exact justice; and consolidation will presumably redound to the advantage of the urban community also, since it will result in a unit in which more efficient administration will be possible, and all areas stand to gain by a better educated community. Also, the fact that such facilities are not used to capacity argues against the urban area's being compensated therefor, which would be the effect of making no deduction for excess capacity.

Cost of the Rehousing Program

Estimates of the cost of a program of rehousing rural elementary enrollments will be influenced by certain assumptions and working hypotheses. In the first place, the estimated cost of such a program will be affected by the unit cost per pupil or per classroom used in the calculations. This problem has been met by working out estimates assuming various unit costs. Secondly, the extent to which new housing will be necessary will depend on whether or not all rural enrollments are centralized. In some areas it may be necessary to continue one- and two-room rural schools for some time to come as a result of highway conditions which make transportation not feasible. The estimates which follow do not take such considerations into account.[58] They should be interpreted as an estimate of what such a rehousing program would cost when and if highway conditions permit centralization of all rural elementary pupils of

[58]For example, highway statistics for 1940 show that, while there has been considerable improvement of rural highways during the last ten years, more than one-fourth of the rural road mileage in that year was represented by earth roads. In some areas of the state the percentage of road mileage unimproved will run considerably higher. For example, 72 per cent of the rural mileage in Clay County is represented by earth roads. *Mileage of Rural Highways in Each County in Each Highway System by Type of Surface* (Table RI-1, Jan. 1, 1940, Bureau of Highway Research, Illinois Division of Highways). It should be pointed out, however, that a large part of the traffic in any given area is borne by the relatively small percentage of total road mileage which is represented by improved roads (see Chapter IV). In 1940, over 80 per cent of the schools outside corporate limits were on paved or low-type surface roads. The proportion of children attending schools on these types of roads was even higher. (Letter from Allen D. Manvel, Director of Research, Illinois Agricultural Association, October 21, 1941, based on advance statistics of the Division of Highways.) In 1940 over 80 per cent of the farms and other rural dwellings were on improved roads. (Letter from F. N. Barker, Division of Highways, Springfield, Illinois, November 7, 1941.)

the state. Furthermore, the extent to which new housing will be necessary will be also influenced by the minimum size assumed for the attendance centers. For example, if all elementary pupils were to be schooled in urban centers of 1,000 or more, more new housing would be needed than if they were to be schooled in centers of 500 or more. The basis for estimation used here has been rather conservative in that respect, assuming that the present schools of three or more teachers would serve as attendance centers for the new attendance areas. In some cases, this would result in elementary attendance units centering in villages of 500 or less.[59]

In order to obtain the necessary data, the estimates have been based on 1936 figures, since these are the only figures available on enrollments classified by size of school.[60] It can be assumed that enrollment in rural schools has declined slightly since 1936, although exactly comparable statistics are not available.[61] This fact will not affect the validity of the estimate greatly, since the decline in such enrollment is not only small but also because part of such decline may be assumed to be represented by rural pupils who are now educated in urban centers, which would tend to cause the unused capacity available to decrease as well as to cause the rural enrollment to decrease.

Statistics of the Superintendent of Public Instruction show that in 1936 the total enrollment of elementary students in rural schools and municipalities of less than 1,000 population was 253,157.[62] If we assume

[59]It is emphasized that using present three-or-more-room schools as centers for new large attendance areas is for purposes of estimating rehousing cost and does not mean that retention of such schools will in all cases be deemed necessary. It is recognized that use of such small schools will in some cases result in attendance centers that are not large enough to attain maximum efficiency. This basis for estimation has been adopted, however, out of a desire not to base estimations on assumptions involving attendance areas larger than rural public opinion can be brought to accept within the not-too-distant future. In other words, concessions to political expediency will probably have to be made before the point of maximum efficiency is reached. For example, some attendance areas may have only 200 pupils. Maximum efficiency in elementary schools is probably reached in enrollments larger than this, although attendance areas of 200 to 300 elementary pupils will be much more efficient than the present ones, and elementary per-pupil costs become constant at about 300 pupils. *Cf.* H. A. Dawson, *Satisfactory Local School Units* (1934), pp. 22 ff., and Paul R. Mort and W. C. Reusser, *Public School Finance* (1934), pp. 238-239.

[60]*State Aid to Schools in Illinois* (Department of Finance), pp. 92-93. The *Statistical Report of the State Superintendent of Public Instruction* does classify statistics according to one-teacher schools and two-or-more-teacher schools, and according to the population of the municipality, but does not contain data necessary to calculate pupil-teacher ratios in the various types of schools, as has been done here.

[61]For example, *total* average daily attendance in schools with one teacher was 118,669 in 1930, while average daily attendance of *resident* pupils in such schools was 113,633 in 1940. *Statistical Report of Superintendent of Public Instruction*, 1930, p. 8, and memorandum by Allen Manvel, Director of Research, Illinois Agricultural Association.

[62]*Statistical Report of the Superintendent of Public Instruction*, 1930. The total elementary enrollment in Illinois was found to be 941,707 (pp. 8, 10); enrollment in municipalities of 1,000 or more was computed to be 688,550 (pp. 130, 134, 136, 137, 138); this leaves a difference of 253,157 as the enrollment in rural schools and municipalities of less than 1,000. Total enrollment was used rather than net enrollment on the assumption that figures for cities of 1,000 and over contain duplications also. It was also desired to avoid understating the amount of new housing needed.

that new facilities would be required for all such pupils, the cost of rehousing them would be as follows, depending on the unit cost per pupil:

Unit Cost	*Total Cost*	*Unit Cost*	*Total Cost*
$200	$ 50,700,000	$450	$114,000,000
250	63,300,000	500	127,000,000
300	76,000,000	550	139,500,000
350	88,700,000	600	149,600,000
400	101,500,000		

The figures given above are the maximum costs of rehousing if schools of three or more teachers in centers of less than 1,000 population are not continued and their present unused capacity is not utilized. However, if such schools are continued, as is proposed in the present study, only the students in the one- and two-teacher schools would need to be rehoused. The average daily attendance in one- and two-teacher elementary schools totaled 151,612 in 1936; if we assume an ADA of about 90 per cent, the net enrollment could conservatively be set at 168,200.[63] Estimates based on this latter figure still would not take into consideration the present unused capacity of three-or-more-teacher schools, which could accommodate an additional net enrollment of more than 16,500, or 9.8 per cent of the total net enrollment.[64] The cost of rehousing elementary pupils enrolled in one- and two-teacher schools, assuming 1936 conditions, would then be as follows:

Unit Cost (per pupil)	*If excess facilities are not used*	*If excess facilities are used*
$200	$ 33,600,000	$30,300,000
250	42,100,000	37,900,000
300	50,500,000	45,600,000
350	58,800,000	53,100,000
400	67,300,000	60,700,000
450	75,700,000	68,300,000
500	84,200,000	76,000,000
550	92,500,000	83,500,000
600	100,400,000	90,500,000

These estimates are considerably lower than some others which have been made,[65] due to the considerations outlined at the beginning of this section.

[63] *State Aid to Schools in Illinois* (Department of Finance, Springfield, Illinois), 1939, pp. 92-93. *Cf. Statistical Report of the Superintendent of Public Instruction*, 1939, p. 8.

[64] *State Aid to Schools in Illinois* (Department of Finance, Springfield, Illinois), 1939, pp. 92-93. The total number of elementary teachers in separate elementary districts with three or more teachers and less than 400 attendance pupils and in unit districts with less than 200 elementary attendance pupils was 4,422 in 1936. The total elementary ADA in the same districts was 104,298. Assuming an ADA of approximately 90 per cent of net enrollment and an enrollment per teacher of 30 (ADA 27), the capacity of the schools would be $4{,}422 \times 27$, or 119,394 attendance pupils; the unused capacity would then be 119,394 minus 104,298, or 15,096 attendance pupils, which is equal to an enrollment of more than 16,500.

[65] For example, see L. R. Grimm, "Financial Requirements of Education in Illinois," in *Illinois Tax Problems* (Illinois Tax Commission, 1930), p. 100. Using a per-pupil cost of $400, his estimate is over 100 million dollars, as compared to approximately 60 million estimated here. Since it would probably be unnecessary to close all schools in centers of less than 1,000 people

In all cases the above estimates represent the total cost, no attempt being made to estimate what the state's and the localities' shares would be. Any such calculation at the present time would have to be based on state totals or averages for valuations, assessment ratios, enrollments, and housing needs. It is doubtful if such a calculation would be valid, since it involves assumptions as to how valuations, enrollment, and housing needs vary from place to place within the state. A number of case studies of proposed larger districts will be necessary before such an estimate can be formed.

Summary

The building grant proposed here would be one conditional upon the taxing unit's being of reasonable size, from the standpoint of area, enrollment, and perhaps valuation. The measure of need would be derived from the number of rural elementary pupils centralized, present unused capacity being allowed for. The guaranteed cost could defensibly be set anywhere between $300 and $400, assuming 1939-40 cost conditions. If a single specific figure is selected, $333 or $350 is the most defensible. The local contribution would have to be less than two per cent of full value if most of the areas of the state were to be able to qualify. It would be desirable to allow existing indebtedness, or at least a part of it, to be deducted from the required local contribution. If this feature were invalidated, and if the new municipal corporation had to be charged with the indebtedness of high school districts with which it is coterminous or substantially so, the qualifying contribution would have to be considerably lower, perhaps .75 of one per cent or lower, in order that areas with low assessment ratios or high ratios of indebtedness to assessed valuation might qualify for aid. The cost to the state of such a program may be estimated at approximately 60 million dollars, assuming a per-pupil cost of $400 and no abandonments of schools with three or more teachers. This latter assumption would mean that some attendance units would be relatively small and inefficient in comparison to larger systems. Such a procedure has been followed, however, out of a desire not to assume attendance areas so large that it would be difficult to get rural public opinion to accept them within the foreseeable future.

in order to have efficient attendance areas, the estimates given here may be interpreted as maxima for an elementary rehousing program. Even further reductions are possible if we take into account the possibility that federal funds may be made available for school building construction. See S. 1305, 76th Cong., 1st Sess., Part 3.

Chapter VI

APPLICATION OF VARIOUS STATE AID PLANS TO LARGER DISTRICTS

The proposal has been made that local communities in Illinois be encouraged to form larger school districts by extending state aid on such terms as to keep the tax rates of the new districts from being much, if any, greater than the rates prevailing in the districts as now constituted. In 1939 the Department of Finance expressed the proposal in specific terms.[1] Under this plan, each newly formed district which meets the requirements set up as to twelve-grade organization, area, and enrollment[2] would be guaranteed equalization goals, as are the present districts, of $80 per high school and $56 per elementary ADA pupil. The qualifying rate would be 0.4 per cent of the full value of the district.[3] The state aid to which such a district would be entitled would be determined in the following manner: (1) compute the full value of the district and multiply this value by 0.4 per cent; (2) deduct the product of these amounts from the guaranteed goals ($80 per high school and $56 per elementary attendance pupil). Where the remainder is less than the present flat grants of $11 per pupil, the aid would be $11 times the resident elementary average daily attendance.[4] This proposal, and variations of it, are tested in the following pages by application to test areas, using various qualifying rates for equalization aid for current expenses and various qualifying local contributions for building aid.

Method Used

There is no way to evaluate the proposal of the Department of Finance in terms of present data expressed as state-wide totals or averages, but some evaluation may be made by applying it to test areas. Before describing this analysis, some of the methods used should be explained. The boundaries of the hypothetical larger districts were drawn by taking the common school districts which are included in whole or in large part by the boundaries of the high school district overlying them. Where a common school district has been divided by a high school district boundary,

[1] *State Aid to Schools in Illinois* (Department of Finance), esp. pp. 60 ff.

[2] Fifty square miles and 1600 pupils, respectively. Conversations with Mr. A. D. Manvel, who drafted the proposal, indicate that these minima were regarded as tentative and suggestive rather than as hard and fast requirements. Also, *cf. State Aid to Schools in Illinois*, p. 59.

[3] Thus, where the assessment ratio is 40 per cent (a typical downstate ratio), the qualifying rate would be $1.00 ($0.40 ÷ .40 = $1.00). The present rate for unit systems is $1.50. The combined qualifying rate for elementary districts and overlying high school districts is $1.75. Thus, the qualifying rate of the new type district would be substantially lower than the rates of present districts. The original proposal was in terms of an elementary goal of $51. The law now guarantees $56, so the original proposal should be interpreted accordingly.

[4] *State Aid to Schools in Illinois*, p. 60.

the whole elementary district has been included in the area used if a substantial part of the district was included by the area served by the high school district and excluded if the high school district, or area served by it, included only a small part of the divided district. The "whole district" method has been followed because of the great amount of time which would be required to apportion valuations and enrollments between the part of the district included and the part excluded.[5]

The three-year average "over-all"[6] tax rate for both educational and building purposes (including debt service) for the component elementary school districts was calculated from the state aid claims for the school years 1938, 1939, and 1940. These over-all tax rates, when compared with the rates of the hypothetical larger district under various state aid programs, furnish the standard for judging the effectiveness of a given state aid program as a means for inducing reorganization. The tax rates of the hypothetical larger districts were worked out on the basis of various assumptions. For example, three different levels of expenditure were used—the present level, a level assuming substantial economies in instruction costs as a result of the number of teachers needed in the new district being less than now obtains in the present elementary districts, and an expenditure level assuming a substantial increase in elementary expenditures which would presumably enable the school to offer an enriched program. Various combinations of state aid plans were then applied to each of these situations to investigate the effect of such plans on local tax rates. In order to do this, it is necessary to make certain assumptions as to where elementary school children are to be educated and housed, since the necessity for building aid will be affected by the assumption adopted. In the hypothetical larger districts used as test areas, it is assumed that the elementary enrollment will be centralized as indicated in the case studies, although it is recognized that, in some such districts, complete centralization may have to wait on improved road conditions. It is also necessary to

[5]It is emphasized that the hypothetical twelve-grade districts used for testing the state aid formulae are not defended here as being the units which will be found to be most desirable under reorganization plans. What is sought here is a test area for the application and testing of state aid formulae. The assumption is that the area bounded by high school district lines or served by a high school is a community, as far as school organization is concerned, or at least a large enough part of a school community to make the area defensible as a political unit. In other words, local reorganization plans might, where a high school or high school district is surrounded by non-high-school territory, result in political units larger than those used here, but there seems no good reason why the political unit for elementary school purposes need be any smaller than the present political unit for high school purposes.

[6]I.e., the sum of the elementary school district rate and the overlying high school district rate. Where a common school district was partly in one high school district and partly in another, the tax rate of the high school district containing the largest part of the common school district was used. The combining of tax rates was done on the basis of the latest maps of the Tax Commission. A common school district was assumed to have been underlying the same high school district during the entire three-year period. Although there were a few changes in high school boundaries during the three-year period, calculations were carried on according to the above-stated assumption, because only a few of the figures would have been changed (and to a relatively slight extent), and because of the great practical difficulty of securing reliable information as to the date at which changes of boundaries took effect.

consider whether or not consolidation is usually thought of as an economy measure. One argument is that, if pupils are educated in systems of adequate size, per-pupil costs can be reduced. It is arguable, however, that consolidation will result not in less but more money being spent for schools, as a result of the higher standards and more adequate curricula demanded by the public when it is seen what the larger system can accomplish.[7] For this reason, one set of results has been worked out on the basis of the present level of educational expenditure, one on the basis of possible economies in instruction costs, and one on the basis of increased elementary educational expenditure. In the latter case, a per-pupil cost of $82 was used, that being the estimated typical educational expenditure in small city elementary schools which in 1935-36 were offering relatively modern curricula to their pupils.[8]

The building aid formula applied is the one developed in the preceding chapter, various qualifying rates ranging from 2 to 0.5 per cent of full value being used. The district's contribution has been computed from the formula $C = \frac{rV}{TU} \cdot EU$.[9] It has been assumed that the district would issue bonds, and that the principal would be paid off over a twenty-year period, the maximum allowed by the constitution.[10] This does not mean that the local communities would need or choose to use the full twenty years. Use of the full twenty years in the calculations is justified, however, on the ground that keeping the yearly principal repayments as small as possible will help to keep down the tax rate after consolidation and that, since the building will benefit the taxpaying generations of ten, fifteen, or twenty years from the date of consolidation, they can properly be asked to share the burden. Debt service has been assumed to be approximately equal for each year, payments on principal being increased as interest payments decrease as a result of the decrease in the outstanding principal. This could be done by the use of serial bonds whose denominations were arranged and whose maturity dates were scheduled according to the proper amortization table. A rate of interest of 4½ per cent has been assumed, since that was a typical rate of interest for school bonds

[7]For example, see L. R. Grimm, "Financial Requirements of Education in Illinois," in *Illinois Tax Problems* (Illinois Tax Commission, Chicago, Ill., 1930), pp. 100-101. Also, *cf. Financial Implications of the Consolidation of Schools and the Transportation of Pupils* (U. S. Office of Education, Circular No. 117, 1934).

[8]L. R. Grimm, *Our Children's Opportunities* (Illinois Education Association, Springfield, Illinois, 1938), found that schools whose median current expenditure per enrollment was $95 had programs well in advance of other schools investigated. However, only 64% of this figure, or $62, was devoted to staff salaries, whereas the average for the counties considered in this study was 74% (*Statistical Report of Superintendent of Public Instruction*, 1930, pp. 58-59). Assuming $62 to be 74% of the educational expenditure, the total required for an enriched curriculum would be $82.

[9]See page 74 where the ratio between the state's contribution and the total cost is determined. The above formula represents the difference between the amount of aid received from the state and the total cost. C = local contribution; r = rate as a per cent of full value; V = full value; T = total enrollment; U = unit cost of $350; E = enrollment to be housed.

[10]Art. IX, sec. 12.

during the period studied.[11] Where present bonded indebtedness exists, it is assumed that it will be met by the proceeds of a tax upon the property within the boundaries of the district as of the time the indebtedness was contracted.[12]

The application of the various state aid proposals to the hypothetical districts has been carried out in such a way that the possible effects of tax rates on voting behavior can be evaluated. In making this analysis, the electorate of a present district, as inferred from its resident elementary average daily attendance, is considered to have an economic incentive to vote for consolidation if the new tax rate is less, or no greater, than its three-year average. It is also necessary to make assumptions as to the manner in which the vote is to be taken. If the vote were taken under the present law providing for the establishment of consolidated districts, there would have to be a majority favorable to consolidation in each of the present districts which would be included within the boundaries of the new large district.[13] Organization of consolidated districts is therefore relatively difficult. Community consolidated districts can be established by majorities of the urban and rural electorates, the count to be taken separately.[14] The analysis of tax differentials and the proportions of the electorate affected by such differentials is based on the assumption that a similar method of voting will be employed in the organization of the new large districts. Although the present law provides that only the people residing within corporate boundaries shall be considered urban, in the analyses which follow all the average daily attendance of the district or districts containing an incorporated municipality is assumed to be urban. This is necessary because there is no reliable method of estimating what percentage of a given urban district's average daily attendance or electorate resides within or without the corporate boundaries. Since a large part of the urban district's population tends to be concentrated within the corporate limits, this limitation is not a serious one.[15]

The result of the case studies should be interpreted as the result which would have obtained had the consolidation taken place in the school year of 1939-40, since that is the period to which the data pertain. It is especially important in the case of the building aid computations to remember that the unit cost guaranteed is based on 1939-40 conditions.

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[11] *Bonded Indebtedness of Local Governments, 1927-1940* (Illinois Tax Commission), p. 104.

[12] *School Law of Illinois*, 1939 (Office of Superintendent of Public Instruction), p. 204.

[13] *Ill. Rev. Stat.*, 1939, c. 122, sec. 130 (b) and (c).

[14] ". . . if a city, village, or incorporated town or part thereof, is located within such territory, the proposition establishing such community consolidated school district shall not be deemed to have received a majority of the votes cast on such proposition unless a majority of the votes cast within such corporate limits, and a majority of the votes cast in such territory outside of such corporate limits, the count to be taken separately, are in favor of establishing a community consolidated district." *Ill. Rev. Stat.*, 1939, c. 122, sec. 89.

[15] The writer wishes to acknowledge his indebtedness and appreciation to Mr. Allen D. Manvel, Director of Research, Illinois Agricultural Association, Chicago, Illinois, and to Mr. L. R.

Milton District

A possible larger unit centering about Milton, in Pike County, was taken as a test area for the Department of Finance proposal. The boundaries of the hypothetical larger district are roughly coterminous with the boundaries of the Milton Community High School District, No. 175. Since this high school district is bounded on all sides except the south by other high school districts, the hypothetical district is probably a justifiable attendance area, within the limits of the "whole district" method.[16] Where parts of common school districts are in other high school districts, it is probable that such areas should be allotted to other attendance areas, but it is assumed that "splitting" districts would not greatly affect the valuation, expenditure, and attendance data based on the whole district method. Another reason for choosing the Milton area is that it appears to be a typical one for the county insofar as tax rates are concerned. Eight of the ten common school districts levied a dollar rate and were special aid districts in 1940. Inspection of the state aid claims in the office of the County Superintendent shows that approximately 80% of the districts in this county are special aid districts. The rates of the community high school district have, however, on the average been slightly higher than the rates of the other high school districts of the county.[17]

On the basis of 1939-40 state aid claims, the hypothetical larger district, comprising 49 square miles and consolidating ten existing common school districts, would have an assessed value of $716,000 and a computed full value of $1,885,000.[18] The new district would have an elementary enrollment of 214 and a high school enrollment of 66.[19] If the building aid qualifying contribution were set at 2 per cent of full value, the new large district would still have some bonding leeway, even if it had to assume the indebtedness of the present high school district.[20] In one respect this

Grimm, Research Director, Illinois Education Association, Springfield, Illinois, for several suggestions helpful in working out the method employed in these investigations.

[16] *Cf. Atlas of Taxing Districts* (Illinois Tax Commission).

[17] *Property Taxation: Assessed Valuations, Levies, Tax Rates, and Tax Extensions, 1937 and 1938* (Illinois Tax Commission), pp. 145, 223. *Property Tax Assessments, Levies, Rates, and Extensions: 1939* (Illinois Tax Commission), p. 105.

[18] The assessment ratio for Pike County is 38% of full value. *Tax-Rate Limits and Assessment Ratios, 1925-40* (Illinois Tax Commission), p. 14.

[19] The high school had 17 tuition pupils in 1939-40, but most of these came from Scott, Greene, and Calhoun counties, according to the County Superintendent. This was due to the athletic record of the Milton coach. It is assumed that such students would be more properly included in larger units in other counties. It is recognized that this unit would be too small for maximum efficiency. Local attitudes in this area are such, however, that additional valuation and students could probably not be obtained by adding more territory to the Milton district. Also, it is improbable that a majority of the voters of this area could be convinced that the buildings in Milton should be abandoned and the pupils in this area educated elsewhere.

[20] The new district's debt limit would be 5 per cent of $716,000, or $35,800. The high school district had bonds outstanding in 1939 amounting to $9,500. *Bonded Indebtedness of Local Governments* (Illinois Tax Commission), p. 283. If the qualifying contribution for building aid were 2 per cent of full value, the district's share would be $16,700, leaving an unused bonding capacity of $9,600.

TABLE 11.—PERCENTAGES OF VARIOUS ELECTORATES WHOSE TAXES WOULD BE NO HIGHER AFTER CONSOLIDATION OF THE MILTON DISTRICT THAN THE 1937-39 AVERAGE, ASSUMING VARIOUS STATE AID PLANS AND LEVELS OF EXPENDITURE

Qualifying Rate for Building Aid	Qualifying Rate for Equalization Aid for Current Expenses*												
	Present Level of Expenditures						Assuming Economies						Enriched Curriculum
	1.50	.40	.35	.30	.25	.20	1.50	.40	.35	.30	.25	.20	.20
No building aid:													
Rural	0	0	13	13	47	55	0	47	55	55	55	55	0
Entire district†	0	0	9	9	32	70	0	32	70	70	70	70	0
2.00 per cent:													
Rural	0	21	47	55	55	55	13	55	55	69	69	100	0
Entire district	0	14	32	70	70	70	9	70	70	79	79	100	0
1.75 per cent:													
Rural	0	21	47	55	55	55	13	55	55	69	69	100	13
Entire district	0	14	32	70	70	70	9	70	70	79	79	100	9
1.50 per cent:													
Rural	0	38	47	55	55	55	21	55	55	69	69	100	13
Entire district	0	26	65	70	70	70	14	70	70	79	79	100	9
1.25 per cent:													
Rural	0	47	47	55	55	55	21	55	55	69	69	100	13
Entire district	0	32	65	70	70	70	14	70	70	79	79	100	9
1.00 per cent:													
Rural	0	47	55	55	55	55	21	55	55	69	69	100	13
Entire district	0	32	70	70	70	70	14	70	70	79	79	100	9
0.75 per cent:													
Rural	0	47	55	55	55	55	21	55	55	69	80	100	13
Entire district	0	32	70	70	70	70	14	70	70	79	87	100	9
0.50 per cent:													
Rural	0	47	55	55	55	69	47	55	69	69	100	100	13
Entire district	0	32	70	70	70	79	32	70	79	79	100	100	9

*Assuming equalization goals of $56 per elementary pupil and $80 per high school pupil. The qualifying rate of $1.50 refers to the present law; all other rates are based on full valuation.

†The urban district (Milton, district 16) would have a lower rate than its three-year average in all cases where the percentages for "Entire district" are 65 or higher.

hypothetical district is atypical, since the urban district does not have the highest tax rate in the area.[21]

If the new district were formed and claimed equalization aid for current educational expenses under the present law, it would receive less state aid than do the present districts. It would, however, receive a substantial increase under the Department of Finance proposal, and if a lower qualifying rate were used the incentive to reorganization would be still greater.[22]

[21]For the state as a whole, the tax rates in the more populous districts tend to be higher than those in rural districts. *State Aid to Schools in Illinois*, p. 90.

[22]On the basis of state aid claims in the office of the County Superintendent, educational expenses for the entire district would be $24,700, and state aid under the present law would amount to $4,530, whereas the total now received by all the districts in this area is $5,800. Under a qualifying rate of $0.40 per $100 of full value, as proposed by the State Department of Finance, state aid would amount to $7,730. If the qualifying rate were reduced to $0.20, the state aid would come to $11,510. The resulting educational tax rates would be $2.81, $2.37, and $1.85 respectively.

Table 11 shows that if the rural enrollments were centrally schooled and the necessary building constructed, and if the present level of educational expenditures were maintained,[23] the present state aid law, with no building aid, would not enable the new district to claim enough aid for any of the local electorate to vote for consolidation without voting higher taxes upon themselves. Even if there were building aid with the qualifying rate set as low as 0.5 per cent of full value, no part of the electorate would have an economic incentive to vote for reorganization. Even if economies in instruction costs[24] were carried out and building aid were offered with a qualifying local contribution of 0.5 per cent, only 47 per cent of the rural electorate could vote for consolidation without voting increased taxes upon themselves, and the urban electorate would also experience an increase.[25]

The Department of Finance proposal would finance the new district more generously than the present law, although in some circumstances a lower qualifying rate would be necessary for it to be effective.[26] This proposal contained no provision for building grants. While it is possible to merge taxing units without merging attendance areas, it is assumed that adequate educational opportunities at a reasonable cost are possible only if there is consolidation of attendance areas, where feasible,[27] rather than mere consolidation of political and administrative units. The Milton district would have to erect an additional building in order to house students from surrounding rural districts. If the district had to raise the entire cost of this new construction from local taxation the burden would be considerable.[28] In this case, if a rate of $0.40 per $100 of full value were required for equalization aid for current expenses, the reduction in the educational tax rate would be offset to such an extent by the tax rate necessary to amortize the cost of the new building that the urban

[23]Using $24,700 as the current level of expenditure, the per pupil costs on the basis of present enrollment would be $65 in the elementary school and $153 in the high school.

[24]A saving of $2,700 could be effected, since the new district would require only 7 elementary teachers (30 pupils to a teacher) instead of the 10 now employed.

[25]It is assumed that the ratio between the resident elementary ADA in each present district and the total ADA for the new large district is approximately the same as the ratio between the electorate in each present district and the total electorate in the new large district. The percentages in Table 11 were derived by comparing the average tax rates in each district, as shown by state aid claims, with the rates which would go into effect if the Milton district were consolidated. In computing the new rates various levels of educational expenditure were assumed, as indicated in the table, and allowance was made for the cost of a new building and miscellaneous expenditures which would result from consolidations (see footnote 28).

[26]In this discussion "effective" means that a given combination of state aids would give a majority of an electorate a lower (or no higher) tax than before.

[27]Since high school pupils are already being transported by the present high school district, which is largely coterminous with the proposed larger district, and since the proposed district is relatively small in area (49 square miles), it is concluded that it would be possible to transport elementary pupils to an attendance center in Milton.

[28]According to the principal of the grade school, present facilities would accommodate 90 pupils, leaving 124 pupils for whom additional facilities would be needed. Assuming a per-pupil cost of $350 this would amount to $43,300; amortization over a twenty-year period at 4½% interest would require a tax rate of $0.47 if no building aid were received. In addition to the cost of the building, a total of $3,405, representing a tax rate of $0.50, would be added to the yearly expense of the new district to cover the cost of transporting pupils, increased expenditures for building maintenance and operation, and retirement of the existing high school indebtedness.

electorate could not vote for consolidation without voting increased taxes upon themselves, and only 47% of the rural electorate could, assuming the present level of education expenditure. Table 11 shows that the following combinations would, however, be effective with respect to both the rural and urban electorate, assuming the present level of educational expenditure: $0.35 and 1 per cent; $0.30 and 2 per cent; $0.20 and no building aid. If economies in instruction costs were instituted, the $0.40 qualifying rate would be effective with respect to both electorates if building aid were offered with a local contribution of 2 per cent, and a $0.35 qualifying rate would be effective with respect to both electorates with no building aid.

If educational expenditures were increased to $82 per elementary ADA pupil and the same level of expenditures for high school purposes maintained,[29] state aid plans which were effective under assumptions of the present or a lower level of expenditure become ineffective. This is true to a marked degree, since much greater state subsidization would be necessary to keep tax rates, under such conditions, from rising above the 1937-39 averages. Even with a qualifying rate of $0.20 for equalization aid for current expenses and building aid with a local contribution of 0.5 of 1 per cent the urban electorate would not be able to vote for consolidation without voting increased taxes upon themselves, and the same holds true for a substantial majority of the rural electorate.

Summary. In the proposed larger Milton district, if building aid were made available with the local contribution being set at 2 per cent of full value, the district would have been able in 1939-40 to qualify for building aid and still have approximately 27 per cent of its bonding capacity unimpaired, assuming that the new district would have to be responsible for the outstanding indebtedness of the high school district. Assuming the present level of educational expenditure, the present state aid law would not enable majorities of the rural and urban electorate to vote for consolidation without voting increased taxes upon themselves, even with building aid available at a qualifying local contribution of 0.5 per cent of full value. Assuming the present level of educational expenditure, the least expensive effective combination of state aid would be $0.35 per $100 full value qualifying rate for equalization aid for current expenses and 1 per cent of full value qualifying local contribution for building aid. If economies in instruction costs were instituted, the smallest contribution by the state which would be effective would be a combination of equalization aid with a $0.35 qualifying rate and no building aid. If elementary educational expenditure were raised to $82 per pupil, qualifying rates as

[29]Since the per-pupil cost of $153 in the high school is already higher than the average, no increase is contemplated. If the per-pupil cost in the elementary school were raised to $82 (computed per-pupil cost of an enriched curriculum under 1935-36 conditions), the educational revenue needed would be raised to $30,000.

low as $0.20 and 0.5 per cent would not prevent local taxes in the new district from rising above the three-year average for the urban and most of the rural electorate.[30]

Pittsfield District

The various combinations of state aid were also tested by applying them to another hypothetical larger district in Pike County. This hypothetical larger district was formed by combining the data for elementary school districts which are included wholly or in large part by the Pittsfield Community High School District (District No. 168). This district is bounded on all sides by other community high school districts and therefore may be assumed to be a reasonable unit as far as the electorate is concerned.[31] While it at present contains but one attendance area for high school pupils, it is possible that two elementary attendance centers would be desirable, since Pittsfield is not in the geographic center of the high school district, and the eastern part of the district might find it inconvenient to transport its elementary pupils there. This problem is minimized by the fact that a small village (Detroit) in the eastern part of the hypothetical larger district, contains a two-room school.[32] If the enrollments of the four districts[33] nearest to this village were centralized in a school in the village, a four-teacher attendance unit would result.

The hypothetical large twelve-grade district used as a test area here was formed by combining financial and enrollment data for the elementary districts underlying High School District No. 168 by the "whole District" method as described above. If such a twelve-grade district were formed, it would result in the consolidation of 27 elementary districts, of which number 25 are rural districts and 2 contain a city or village. All except 4 of these elementary districts were special aid districts in 1939-40. This proportion is about the same as that for the entire county.[34] On the basis of state aid claims for 1939-40 the hypothetical twelve-grade district, comprising an area of 126 square miles with an enrollment of 1,116, would have an assessed valuation of $2,968,000 and a computed full value of $7,810,000.[35] Even if the new district were responsible for the indebtedness outstanding of both High School District 168 and District 88 ($63,000

[30]As used in this discussion, "least expensive combination of state aids" means that combination of equalization and building aid which would result in the least expense to the state treasury. The effective combination which would be least expensive to the state can be determined by examination of Table 11.

[31]Latest maps of the Tax Commission show non-high-school territory on the west side, but inspection of county records reveals that a high school district centering in Barry has been formed in this area since the publication of these maps.

[32]*Cf. Atlas of Taxing Districts* (Illinois Tax Commission, 1930), p. 112.

[33]Districts 12, 13, 42, and 43, which enrolled 119 pupils in 1939-40. (Data from state aid claims.)

[34]Approximately 85% of the present elementary districts included in the hypothetical larger district are special aid districts, while 80% of the districts of the county are special aid districts.

[35]The assessment ratio is 38%. *Tax Rate Limits and Assessment Ratios, 1925-1940* (Illinois Tax Commission), p. 14.

in 1939),[36] it would still have been able to qualify for building aid and have bonding leeway left, providing the qualifying local contribution were no higher than 3 per cent of full value.[37]

The cost of rehousing rural elementary pupils in the town of Pittsfield and the village of Detroit would be a relatively small part of the total tax burden.[38] This is so because the number of rural pupils is relatively small when compared with the total enrollment of the district and because present unused capacity will accommodate approximately 40 per cent of the rural enrollment.[39]

Table 12 shows that if the new large district were to maintain the present level of educational expenditures and were to construct new buildings to house the rural pupils which present facilities will not accommodate, under the present law none of the rural districts could vote for consolidation without voting increased taxes upon themselves. This would be true even if building aid were offered with a qualifying local contribution set as low as 0.5 per cent of full value. Assuming the present level of educational expenditures, the least expensive combination of state aids which would give a majority of the rural electorate as well as a majority of the urban electorate a favorable tax rate differential after consolidation would be equalization aid with a qualifying rate of $0.40 per $100 of full value and no building aid. If reasonable economies in instruction costs were realized as a result of consolidation, a large majority of the rural electorate and all of the urban electorate would experience a reduction in tax rates, even assuming the present equalization law and no building aid. If elementary educational expenditures were to increase to $82 per enrollment pupil, with high school educational expenditures remaining at their present level, the least expensive combination of state aids providing favorable tax rate differentials for a majority of the rural electorate as well as for a majority of the urban electorate would be equalization aid with a qualifying rate of $0.25 per $100 of full valuation and building aid with a qualifying local contribution of 2 per cent of full value.

Summary. In 1939, the hypothetical large district could have assumed the bonded indebtedness of the Pittsfield High School District and still have qualified for building aid without using up all of its bonding power, assuming that the local qualifying contribution for building aid did not

[36] In 1939 the outstanding indebtedness of District 88 was $40,000, and of High School District 168 it was $23,000. *Bonded Indebtedness of Local Governments, 1927-1940* (Illinois Tax Commission), p. 282.

[37] For example, if the qualifying rate for building aid were set at 2% of full value, the district could assume the $63,000 debt, issue bonds for $28,000 for new buildings (40% of cost of rehousing 200 students), and thus have a total debt of $91,000. The 5% debt limit for the district would be $148,400.

[38] Only 18 cents per $100 of assessed valuation if no building aid is granted, and only 7 cents per $100 if building aid is granted with the local contribution set at 2 per cent of full value.

[39] Present facilities will accommodate 137 of the 337 rural pupils, assuming 30 pupils per teacher unit.

TABLE 12.—PERCENTAGES OF VARIOUS ELECTORATES WHOSE TAXES WOULD BE NO HIGHER AFTER CONSOLIDATION OF THE PITTSFIELD DISTRICT THAN THE 1937-39 AVERAGE, ASSUMING VARIOUS STATE AID PLANS AND LEVELS OF EXPENDITURE

Qualifying Rate for Building Aid	Qualifying Rate for Equalization Aid for Current Expenses*								
	Present Level of Expenditures		Assuming Economies	Enriched Curriculum					
	1.50	.40‡	1.50‡	1.50	.40	.35	.30	.25	.20
No building aid:									
Rural	0	68	92	0	0	0	0	32	51
Entire district†	0	83	97	0	0	0	55	68	76
2.00 per cent:									
Rural	0	88	94	0	0	0	32	51	88
Entire district	55	95	98	0	0	55	68	76	95
1.75 per cent:									
Rural	0	88	94	0	0	0	32	51	88
Entire district	55	95	98	0	0	55	68	76	95
1.50 per cent:									
Rural	0	88	94	0	0	0	32	51	88
Entire district	55	95	98	0	0	55	68	76	95
1.25 per cent:									
Rural	0	88	94	0	0	0	32	51	88
Entire district	55	95	98	0	0	55	68	76	95
1.00 per cent:									
Rural	0	88	94	0	0	0	32	51	88
Entire district	55	95	98	0	0	55	68	76	95
0.75 per cent:									
Rural	0	88	97	0	0	0	35	56	88
Entire district	55	95	99	0	0	55	69	78	95
0.50 per cent:									
Rural	0	88	97	0	0	0	39	68	88
Entire district	55	95	99	0	0	55	71	83	95

*Assuming equalization goals of $56 per elementary pupil and $80 per high school pupil. The qualifying rate of $1.50 refers to the present law; all other rates are based on full valuation.

†The majority of the urban electorate would have a lower tax rate than its three-year average in all cases where the percentages for "Entire district" are 55 or higher.

‡A qualifying rate for equalization aid for current expenses of less than $0.40, assuming the present level of expenditures, or of less than $1.50 assuming economies, would result in lower taxes for the overwhelming majority of both rural and urban electorates.

exceed 2 per cent of full value. The cost of rehousing rural elementary pupils in this district would represent a relatively small proportion of the total tax burden, especially if building aid were given. The least expensive combinations of state aids which would be effective, as far as both rural and urban electorates are concerned, are as follows: if the present level of educational expenditures is maintained, equalization aid with a qualifying tax rate of $0.40 per $100 of full value and no building aid; if reasonable economies are realized, the present equalization aid (with a qualifying rate of $1.50 per $100 of assessed value) and no building aid; if educational expenditures were markedly increased, equalization aid with a qualifying rate of $0.25 per $100 of full value and building aid with a qualifying local contribution of 2 per cent of full value.

St. Joseph District

The hypothetical twelve-grade St. Joseph District is an area in Champaign County whose boundaries are substantially coterminous with those of the St. Joseph High School District (Number 305). This hypothetical twelve-grade district would have an area of approximately 72 square miles, an assessed valuation of $2,421,000, with a computed full value of $8,260,000, and an enrollment for the twelve grades of 457. Eighteen elementary districts would be consolidated if such a district were formed.[40] If the proposed larger district had been formed in 1939-40 and had assumed the indebtedness of the high school district, it would still have been able to bond itself for the entire cost of new buildings required by centralized elementary enrollment, as would have been required if the qualifying rate for building aid had been set at 2 per cent of full value. Its unused bonding capacity, had this taken place, would have been approximately 8 per cent of the 5 per cent bonding capacity which the State Constitution allows.[41]

If the new district maintained the same level of educational expenditure as the present component districts, the least expensive combination of state aids which would give both the rural and urban electorates a lower tax rate after consolidation than they had before would be equalization aid with a qualifying rate of $0.20 per $100 of full valuation and building aid with a local contribution of 1.5 per cent of full value (Table 13). If economies in instruction costs were realized, the least expensive combination would be equalization aid with a qualifying rate of $0.25 per $100 of full value and no building aid; or equalization aid with a qualifying rate of $1.50 per $100 (present law) and building aid with a qualifying rate of 1.75 per cent of full value. If the new district were to maintain the present level of high school educational expenditures and increase elementary educational expenditure to $82 per enrollment pupil, none of the combinations of state aid investigated would be sufficient to give a majority of the rural electorate lower tax rates after consolidation than before. This test area is noteworthy for the fact that comparatively low qualifying rates are required to give the rural areas a favorable tax rate differential. The reverse is true regarding the urban area, all of the combinations of state aids investigated giving a tax rate differential favorable to consolidation. This is because the three-year average tax rate for the urban

[40] State aid claims for the school year 1939-40 and *Tax Rate Limits and Assessment Ratios, 1925-1940* (Illinois Tax Commission), p. 116. In computing the full value, a figure midway between the rural ratio of 28.8 and the urban ratio of 29.9 is used because approximately one-half of the county's valuation is urban.

[41] Five per cent of the assessed value of the proposed large district would be $121,000. The indebtedness of the high school district, as of 1939, was $36,000, leaving $85,000 unimpaired. Assumed cost of the new building would be $74,600, leaving a bonding capacity of $10,400, or approximately 8 per cent of $121,000. *Bonded Indebtedness of Local Governments, 1927-1940* (Illinois Tax Commission), p. 180.

TABLE 13.—PERCENTAGES OF VARIOUS ELECTORATES WHOSE TAXES WOULD BE NO HIGHER AFTER CONSOLIDATION OF THE ST. JOSEPH DISTRICT THAN THE 1937-39 AVERAGE, ASSUMING VARIOUS STATE AID PLANS AND LEVELS OF EXPENDITURE

Qualifying Rate for Building Aid	Qualifying Rate for Equalization Aid for Current Expenses*									
	Present Level of Expenditures				Assuming Economies				Enriched Curriculum	
	1.50	.40-.30	.25	.20	1.50	.40-.30	.25	.20	1.50	.40-.20
No building aid:										
Rural	4	4	7	15	28	28	51	91	0	0
Entire district†	44	44	46	51	58	58	72	95	42	42
2.00 per cent:										
Rural	4	4	7	15	28	28	51	91	0	0
Entire district	44	44	46	51	58	58	72	95	42	42
1.75 per cent:										
Rural	4	4	7	15	51	51	51	97	0	0
Entire district	44	44	46	51	72	72	72	98	42	42
1.50 per cent:										
Rural	7	7	7	51	51	51	60	97	0	0
Entire district	46	46	46	72	72	72	77	98	42	42
1.25 per cent:										
Rural	7	7	7	51	60	60	74	97	0	0
Entire district	46	46	46	72	77	77	85	98	42	42
1.00 per cent:										
Rural	7	7	11	56	74	74	91	100	0	0
Entire district	46	46	49	74	85	85	95	100	42	42
0.75 per cent:										
Rural	11	11	11	65	91	91	91	100	0	0
Entire district	49	49	49	80	95	95	95	100	42	42
0.50 per cent:										
Rural	11	11	20	91	91	91	91	100	0	0
Entire district	49	49	54	95	95	95	95	100	42	42

*Assuming equalization goals of $56 per elementary pupil and $80 per high school pupil. The qualifying rate of $1.50 refers to the present law; all other rates are based on full valuation.

†All of the above combinations of state aids would give a tax rate in the new large district lower than the three-year average in the urban district.

district is considerably higher than the three-year averages for the rural districts.

Summary. The hypothetical twelve-grade St. Joseph district would be able to assume the existing debt of the high school district and still bond itself for the entire cost of the new building, although this would leave but 5 per cent of its bonding capacity unimpaired. The new district would not be eligible for building aid if the qualifying local contribution were set at 1.75 per cent or higher. The least expensive combinations of state aids which would provide tax rate differentials favorable to consolidation are as follows: if the present level of educational expenditure were maintained, equalization aid at $0.20 per $100 of full value and building aid

at 1.5 per cent of full value; if economies were realized, equalization aid at $0.25 per $100 of full value and no building aid or equalization aid at $1.50 per $100 of assessed value and building aid at 1.75 per cent of full value. If the present level of high school expenditures were maintained and elementary educational expenditures increased to $82 per enrollment pupil, none of the combinations of state aid investigated would provide a tax rate differential favorable to consolidation. Relatively low qualifying rates would be required in order to provide tax rates in the new large district which would be lower than the average tax rates in the rural area.

Summary

Evaluation of the Department of Finance proposal is not possible in terms of state-wide totals or averages available at present. Such evaluation must be made by intensive case studies of hypothetical larger districts. Due to the amount of investigational effort required in making one of these case studies, the number of cases studied here is not large enough to permit inferences as to what the findings would be if similar case study techniques were employed throughout the entire state. They do, however, serve to clarify certain issues and to suggest problems worthy of further study.

The least expensive combinations of state aids which would give a tax rate differential favorable to consolidation to a majority of both the rural and urban electorates in the three districts investigated are summarized below. The first figure refers to the qualifying rate for equalization aid for current expenditure, expressed as dollars per $100 of full value, except where $1.50 appears, which is expressed in terms of dollars per $100 of assessed value. The second figure refers to the qualifying local contribution for building aid, expressed as a percentage of full value.

Expenditure Level Assumed	*Milton District*	*Pittsfield District*	*St. Joseph District*
Present level	$0.35, 1%	$0.40, no bldg. aid	$0.20, 1.5%
Economies in instruction costs	$0.35, no bldg. aid	$1.50, no bldg. aid	$0.25, no bldg. aid; $1.50, 1.75%
Increased expenditure	None of combinations studied effective	$0.25, 2%	None of combinations studied effective

From this summary it can be seen that areas will vary considerably with respect to the amount of state aid needed to provide tax rate differentials favorable to consolidation. For example, in areas where tax rates have been relatively low, as in the St. Joseph area, lower qualifying rates

will be needed in order for state aid to provide tax rate differentials favorable to consolidation than in areas where tax rates have been higher, as in the Milton district. State aid to induce consolidation will be costly, therefore, to the extent that low rate areas obtain throughout the state. The available data indicate that low rate areas are relatively numerous.[42] The preceding summary also indicates that the effect on the local tax rate of changing the expenditure level in the new large district may outweigh changes in the amount of state aid received.

The case studies reveal that the Department of Finance proposal would give more generous aid to the test areas than the present law. They also suggest, however, that similar studies throughout the entire state may show that the qualifying rate for equalization aid for current expenses should be lowered and building aid made available in order to establish tax rate differentials favorable to consolidation throughout a substantial portion of the state. The case studies suggest that the cost of new buildings made necessary by consolidation will not be very great where a large part of the new district's enrollment is already educated in an urban center where there exists some unused building capacity. For example, in the hypothetical large Pittsfield district, the tax rate to amortize the cost of the new buildings would be only $0.18 per $100 of assessed valuation, assuming no building aid. Where a relatively small urban community would serve as an attendance center for the new large district, there would be a tendency, other things being equal, for such a tax rate to be higher, since the ratio of the enrollment to be housed to the resources of the district would be higher. For example, in the Milton district, the tax rate to amortize the cost of the new building would be $0.47 per $100 of assessed valuation, assuming no building aid.

The case studies also reveal that, in typical situations where the urban district's tax rate is the highest tax rate in the area, the problem of securing favorable tax rate differentials for a majority of the people in the rural area makes a more expensive combination of state aids necessary than would be the case if a vote were taken in which the urban electorate could over-ride the rural electorate. "Under-cutting" the tax rates of a majority of the rural people is more difficult and expensive than merely "under-cutting" the rates of a majority of the people of the entire district. The effectiveness of a given amount of state aid in inducing consolidation will therefore depend to some extent upon the manner in which the vote is taken.

[42]For example, in 1936 it was found that, of 11,245 elementary districts studied, 8,830 had educational tax rates less than $1.00 per $100 of assessed valuation (the qualifying rate for equalization aid). *State Aid to Schools in Illinois* (Department of Finance), p. 96. The more populous districts tend to have higher rates, however.

Chapter VII

THE DISPARITY BETWEEN URBAN AND RURAL ASSESSMENT RATIOS

Economic Factors

Consideration of the disparity between urban and rural assessment ratios is directly related to the problem of economic inducements for school consolidation, since the disparity in assessment ratios has constituted one of the hindrances to the creation of larger units of taxation for school purposes.[1]

It has been pointed out that the problem of establishing tax rate differentials favorable to consolidation is, in typical situations, more difficult in rural areas than in urban areas, since tax rates in rural areas tend to be lower than in urban districts.[2] This is the result of three factors. In the first place, standards regarding such matters as curriculum and pay of teachers are lower in the rural areas. Secondly, the ratio of tax resources of the rural districts to the educational need as locally conceived is relatively high as compared with the resources of the urban districts.[3] In the third place, even if other factors were equal, rates in the rural districts (as expressed in terms of assessed valuations) would tend to be lower than in urban districts because the assessment ratios in rural areas are typically higher than in the urban areas, as is pointed out later. For example, assume an urban and rural district each with the same full valuation—$1,000,000—and the same educational need. If the assessment ratio is 35 per cent in the urban district and 45 per cent in the rural district, the respective assessed valuations would be $350,000 and $450,000. In order to raise the same amount of money from these two tax bases, a higher tax rate would be needed in the urban district than was needed in the rural area.

If in the proposed larger school taxing units, the urban assessed valuation were raised to the same proportion of full value obtaining for rural assessed valuations, the problem of establishing economic inducements for the rural electorate would be simplified. Since more money would be raised in the urban area than if the lower urban assessed valuation were used, the tax rate of the rural area would be lower than if no

[1] *State Aid to Schools in Illinois* (Department of Finance), p. 57.

[2] *Ibid.*, p. 96. Also see Chapter VI, especially the summary. "Tax rate differentials favorable to consolidation" means lower rates in an area after consolidation than those prevailing before consolidation.

[3] For the school year 1935-36, the average assessed value per pupil was $9,107 for one-teacher districts, $4,716 in separate elementary districts with three or more teachers, and $5,671 in unit districts (excluding Chicago). Notwithstanding the low pupil-teacher ratios in rural areas, the corresponding average assessed values per teacher were: $121,502; $125,028; and $160,455. *Ibid.*, pp. 92-93.

such correction were made. Therefore, rural people could no longer argue that their inclusion in a large taxing unit containing a municipality would mean their being forced to shoulder more than their fair share of the tax burden of the large district.

Examination of rural and urban assessment ratios in a sample group of counties indicates that apportioning tax levies in the new large school districts on the basis of full value would in most cases result in lower tax rates in rural areas than if assessed valuations were used, since urban assessment ratios are typically lower than rural ratios (Table 14).[4] The extent to which such a procedure would contribute to solving the problem of providing tax rate differentials favorable to consolidation in rural areas will depend on the extent to which the rural assessment ratio is higher than the urban assessment ratio. Some conception of the extent to which this is true in typical situations can be gained by an examination of county average rural and urban ratios. For example, in Adams County in 1939, the rural ratio was approximately 64 per cent and the urban ratio was approximately 50 per cent. In a new large district in which the same relationship exists between rural and urban assessments, apportioning tax levies between urban and rural areas on the basis of full value would result in tax rates, in terms of assessed value, of 88 per cent in the rural area and 112 per cent in the urban area of what they would be if levies were apportioned on the basis of assessed valuation, assuming that half of the new district's valuation is rural and half is urban. This situation is fairly typical.[5]

Another factor which will affect the extent to which apportioning tax levies on the basis of full value will result in lower rural tax rates is the proportion of the valuation of the large school district which is contained in the urban area. The calculations in Table 14 are based on the assumption that the assessed valuation of the new large district is divided equally between the urban and rural area. Where the urban area contains less than half of the valuation of the district, apportioning tax levies on the basis of full value becomes of less significance, from the standpoint of

[4]In the 40 counties contained in this table, urban assessment ratios were lower than rural ratios in 30 cases. Where urban ratios were higher, they were higher by only a slight amount except for two counties (Cumberland and Marion). If both urban and rural ratios were established for each township in the counties studied, it might be found that counties which appear to be exceptional cases (with urban ratios higher than rural ratios) may conform to the typical pattern after all. For example, in a county in which the average urban ratio is higher than the average rural ratio, the urban average ratio for the county may be largely determined by the ratio for the largest city in the county. The rural property in the township surrounding this city may be assessed higher than the property in the city, but since it represents but a small part of all the rural property of the county its effect on the county average rural ratio may be slight. In other words, the township is the unit of assessment, and a given township's ratio may influence the county average urban ratio profoundly and the county average rural ratio only slightly. Conversely, determining ratios for the smaller municipalities of the county may show them to be assessed at a lower ratio than the surrounding rural property.

[5]In Table 14, 16 of the figures in column 5 are 90 or less. Also, it may be that the extent to which urban and rural assessment ratios differ within areas of the size of present high school districts is somewhat obscured by combining the data for all rural property.

TABLE 14.—EFFECT OF USING FULL VALUE TO APPORTION TAX LEVIES IN NEW LARGE SCHOOL DISTRICTS, 1939*

County	Ratio of Assessed Value to Full Value			If full value is used, tax rate would be following percentage of present rate	
	Rural	Urban	Total	Rural	Urban
Adams	63.8	49.8	113.6	88	112
Boone	62.0	61.0	123.0	99	101
Cass	57.5	54.1	111.6	97	103
Champaign	28.8	29.9	58.7	102	98
Christian	49.5	45.4	94.9	96	104
Coles	39.6	28.2	67.8	83	117
Crawford	47.5	29.0	76.5	76	124
Cumberland	30.4	35.0	65.4	107	93
De Witt	39.5	38.8	78.3	99	101
Du Page	27.7	24.5	52.2	94	106
Effingham	51.9	42.8	94.7	90	110
Fayette	43.1	36.7	79.8	92	108
Ford	38.5	30.6	69.1	89	111
Franklin	38.1	34.7	72.8	95	105
Jackson	37.5	27.8	65.3	85	115
Jefferson	43.3	26.6	69.9	76	124
Jo Daviess	58.7	60.0	118.7	101	99
Kane	36.2	31.4	67.6	92	108
Kankakee	33.3	25.0	58.3	86	114
Knox	51.5	53.9	105.4	102	98
Lawrence	51.8	39.0	90.8	86	114
Lee	44.1	38.8	82.9	94	106
Logan	50.4	42.5	92.9	92	108
Macoupin	45.4	41.4	86.8	95	105
Madison	37.8	26.2	64.0	82	118
Marion	26.8	34.7	61.5	113	87
Mason	58.3	55.0	113.3	97	103
McDonough	40.0	41.1	81.1	102	98
Montgomery	48.9	40.7	89.6	91	109
Ogle	47.2	39.1	86.3	90	110
Pike	38.2	34.8	73.0	96	104
Pulaski	77.9	53.3	131.2	81	119
Rock Island	43.3	32.6	75.9	86	114
St. Clair	42.2	33.6	75.8	89	111
Saline	31.0	32.0	63.0	102	98
Sangamon	35.9	38.0	73.9	102	98
Shelby	43.0	42.8	85.8	100	100
Vermilion	40.8	42.8	83.6	102	98
Winnebago	36.8	28.9	65.7	88	112
Woodford	38.0	30.0	68.0	88	112

*Present rural and urban assessment ratios are from *Tax Rate Limits and Assessment Ratios, 1925-1940* (Illinois Tax Commission), pp. 113 ff. In computing the percentages of the present rate which the urban or rural sections would pay if tax rates were based on full value, it was assumed that the urban and rural areas each contain 50 per cent of the assessed valuation. Sample counties include the 35 used by the Illinois Education Association for making predictions regarding the effects of raising equalization levels, plus those counties in Table 2 which did not appear in the Association's sample.

its effect on rural tax rates, but it increases in significance as the proportion of the district's assessed valuation contained in the urban area increases. If the new large districts conform roughly to the present four-year high school attendance areas, many of the large districts will include municipalities which would contain less than half of the district's valuation. For example, the hypothetical Pittsfield district would have but 48 per cent, the Milton district would have only 12 per cent, and the St. Joseph district would have only 19 per cent of their respective assessed valuations in the urban areas.[6] If a new large district were formed of the elementary districts lying in non-high-school territory in the area served by the Urbana unit system, however, the resulting district would have 82 per cent of its assessed valuation in the urban areas.[7] Some conception of the extent to which areas would vary in this respect can be gained from an examination of the proportion of assessed valuation contained in urban areas in selected counties (Table 15). In the light of these facts, if an attempt should be made to draft legislation providing for apportioning tax levies between urban and rural areas on the basis of full values, it might be well, in the earlier years of the use of the plan, to restrict it to areas in which the cities are larger than a specified size.

Problems Involved in Corrections for Disparity in Assessment Ratios

The preceding treatment has been confined to an economic analysis of the problem posed by disparity of assessment ratios so far as school consolidation is concerned. If legislation were to be drafted to correct for, or minimize, this disparity, certain legal, administrative, and political problems would be encountered which must be considered.

Legal questions. The Illinois Supreme Court has, in two recent cases, refused to permit tax burdens to be corrected by resort to evidence concerning disparity in assessment ratios. In the light of the Court's attitude toward the problem of disparity of assessment ratios as manifested in these cases, the problem of providing a secure legal basis for the type of correction described above may be a serious one.[8]

[6] See Chapter VI.

[7] Data compiled from 1939-40 state aid claims.

[8] *Tuttle* v. *Bell*, 377 Ill. 510 (1941). *Mobile & O. R. Co.* v. *State Tax Commission*, 374 Ill. 75, 28 N. E. 2d 100 (1940). In the first case it was held that a County Treasurer could not be enjoined from collecting part of the property tax of protesting owners of rural real estate merely because rural property was assessed at a higher ratio than urban property on the ground that, when value is fixed by assessing officials, it is not, in the absence of fraud, subject to revision by the judiciary, and on the ground that one group of taxpayers cannot be given relief merely because another class of property is valued too low. In the second case the Tax Commission was required to use the state-wide average ratio in assessing railroad property rather than the average ratio of the county in which the property was located on the ground that the State is still a taxing unit and that to follow the procedure desired by the Commission would violate the requirement of the Constitution (Art. IX, sec. 1) that taxation must be uniform. For a discussion of the Illinois cases on assessment ratios generally, see "The Illinois Constitutional Requirement of Uniformity in Taxation," 33 *Illinois Law Review* (May, 1938), pp. 65 ff.

It is improbable that the problem could be solved merely by providing that assessed valuations need not be changed and that each area should bear the same proportion of the tax levy as it has of the full value of the district, as in New York,[9] since to do this would result in a different tax rate (in terms of assessed valuation) in different parts of the district, which would probably be held to be in violation of the uniformity clause. The problem would probably have to be met by insuring that the assessed valuations bear the same relation to full values in all areas. This could be approached in either of two ways. The first would be to improve the original assessments by providing that local assessors be full time, trained, appointive officials supervised and aided by the Tax Commission.[10] The second approach would be to equalize the original assessments in such a manner that rural and urban property would be assessed at the same ratio. The county boards of review have ample authority to make the type of urban-rural equalizations contemplated here[11] but do not exercise it, as examination of Table 15 will show. It would also be possible to have the equalization made by the State Tax Commission. This could be done by merely amending the present statute giving the Commission authority to equalize assessments for the state property tax to include school taxes as well as state taxes.[12] While the more nearly ideal solution would be good

[9] "*Equalization within joint districts.* When a district embraces parts of two or more towns, the trustee, trustees, or board of education of such district may upon their own motion, and shall upon the written request of three or more persons liable to pay taxes upon real property in such district secure from the last completed town assessment-rolls a statement of the assessed valuation of each parcel of real property and all personal property subject to taxation for school purposes in such district and shall deliver such statement to the district superintendent of the supervisory district in which the school house of such district is located. Such district superintendent shall immediately secure from the state tax commission a statement of the rates of equalization fixed by the commission for the towns in which such district is situated and shall determine the full valuation of the real property of each part of a town included in such district by dividing the total assessed valuation of such real property in such part of a town by the rate of equalization fixed by the commission for such town. . . . Such district superintendent shall also determine what proportion of any tax thereafter to be levied in such district for school purposes shall be levied upon each part of a town included in such district by dividing the sum of the full valuation of real property and the assessed valuation of personal property in such part of a town by the total of all such full valuations of real property and assessed valuation of personal property in such school district. Such proportions should be expressed in the nearest exact hundredths and the trustee or trustees of such school district shall thereafter levy such a proportion of any tax to be raised in the district upon each part of a town included in such district as shall have been determined by the district superintendent, until a new determination shall have been made. . . ." *Cahill's Consolidated Laws,* 1930, c. 15, sec. 414. This results in different tax rates, in terms of assessed valuations, in different parts of the school district. Letter from Daniel R. Spratt, Department of Taxation and Finance, Albany, N. Y., September 18, 1941. This statement applies only to parts of the district lying in different towns, however, no distinction being made between urban and rural assessments. Letter from Daniel R. Spratt, October 3, 1941.

[10] See *First Report of Governor Dwight H. Green's Advisory Committee on Taxation,* 1941, p. 38.

[11] *Ill. Rev. Stat.,* 1941, c. 120, sec. 580 (5). *People* v. *Millard,* 307 Ill. 556, 139 N. E. 113 (1923); *People* v. *Orvis,* 301 Ill. 350, 133 N. E. 787 (1921).

[12] The present statute reads as follows. "All State taxes shall be extended by the respective county clerks upon the property in their counties upon the valuation produced by the equalization and assessment of property by the Tax Commission. All other taxes shall be extended upon the valuation produced by the equalization and assessment of property by the local assessment officers, and all property originally assessed by the Tax Commission." *Ill. Rev. Stat.,* 1941, c. 120, sec. 644. Inserting the words "and school" after the first two words quoted and appropriate amendment of section 611 of the same chapter would give the Commission the power and duty to make the type of equalization contemplated here. Such legislation would be analogous to a bill introduced in the 1941 regular session of the legislature providing that the Tax Commission shall "for

original assessments, it is probable that equalization by the Tax Commission is the most nearly feasible politically, at least so far as the immediate future is concerned.

Administrative feasibility. In order for urban-rural equalization of assessments within new large school districts to be made, separate assessment ratios would have to be established for both the urban and the rural areas of the district. Assessment ratios for Illinois have been derived from sales data concerning real estate transfers.[13] Only rarely will it be possible

TABLE 15.—RATIO OF URBAN ASSESSMENTS TO TOTAL ASSESSMENTS IN SELECTED COUNTIES, 1939*

County	Total Assessed Valuation in County ($000)	Assessed Urban Valuation ($000)	Percentage of Valuation That Is Urban
Adams	60,230	36,284	60
Champaign	53,530	24,084	45
Effingham	13,623	5,432	40
Jefferson	13,711	6,453	47
Kane	82,966	61,517	74
Madison	85,106	56,932	67
McDonough	25,975	8,523	33
Pike	14,173	3,467	25
Ogle	33,333	7,739	23
Sangamon	84,670	55,317	65
Saline	11,337	4,397	39
Vermilion	60,390	28,560	47
Woodford	20,735	3,487	17

*Computed from *Property Tax Assessments, Levies, Rates, and Extensions, 1939* (Illinois Tax Commission), pp. 12, 14.

to make from sales data valid determinations of assessment ratios for rural areas (and in many cases urban areas also) as small as those which would be enclosed by new large twelve-grade school districts conforming roughly to the present four-year high school attendance areas, because of the small number of sales of property which would be available for computing a ratio for such an area.[14] In order to determine valid ratios for making the type of urban-rural equalization within large school districts suggested here, it would be necessary to supplement sales data by mass appraisals,[15] as in Wisconsin, and by sample appraisals, as in Wis-

purposes of local taxation, equalize the valuation and assessment of property of political subdivisions of the State and municipal corporations therein in all cases where such political subdivisions and municipal corporations are located in two or more counties, to the end that all the property in any such political subdivision or municipal corporation shall be assessed as uniformly as may be possible." House Bill 517, 62nd General Assembly. The bill passed the House but was defeated in the Senate, the argument being that it delegated too much power to the Tax Commission. Letter from William F. Gibbs, State Representative, 36th district, September 20, 1941.

[13] *Tax Rate Limits and Assessment Ratios, 1925-1940* (Illinois Tax Commission), pp. 2 ff.

[14] Letters from E. L. Maynard, Illinois Tax Commission, Chicago, Illinois, October 9, 1941, and December 17, 1941.

[15] Multiplication of the units of real property by unit values determined by reference to soil maps and sales data.

consin and New York.[16] By using these three techniques, it should be possible to establish ratios for areas as small as the new large school districts, as is already done in New York upon application by local people.[17] Compared with the use of sales data, mass appraisals and sample appraisals are relatively costly, but for the first few years of a school reorganization program the problem of such costs would probably not be a serious one, since determination of district ratios would not have to be made throughout the entire state but only in those areas where new large districts were organized. Even if the entire state were organized into new large twelve-grade districts conforming in general to the present four-year high school areas, the number would be only approximately 700,[18] as compared with 12,142 of the present districts.

Political feasibility. The most nearly ideal method of urban-rural equalization would be the improvement of the original assessment, since equalization can only approximate equity as between various classes of property and cannot alleviate injustices caused by differential treatment of individual holdings within a given class. Reform of the local assessment system may be expected to require a considerable amount of propaganda and political pressure because of vested interests which would be disturbed. Because of this fact, it seems unwise to make any plan of school reorganization dependent upon reform of the assessment system, or to ask the proponents of school reorganization to wait until the assessment system is reorganized. Reliance upon county boards of review would seem to be a forlorn hope, since they now have adequate power to correct manifest disparities in urban and rural assessment ratios, but are not doing so. The remaining solution is equalization by a state agency, such as the Tax Commission. Even this solution would encounter certain problems. The urban-rural equalization proposed here would somewhat complicate local finance and might be difficult for local public opinion to understand. For example, it might be difficult for a property holder to understand why his real estate should have one valuation for purposes of

[16]Letter from Forrest W. Gillett, Department of Taxation, Madison, Wisconsin, November 28, 1941. Letter from Daniel R. Spratt, Department of Taxation and Finance, Albany, N. Y., October 3, 1941. The New York ratios are said to be only approximate, but are defended on the ground that they enable a closer approximation to equity than would use of unadjusted assessed values. A. G. Grace and G. A. Moe, *State Aid and School Costs* (1938), p. 154.

[17]Letter from Daniel R. Spratt, Department of Taxation and Finance, Albany, N. Y., September 18, 1941. It may also be possible to supplement sales data, mass appraisals, and sample appraisals by ability indices derived by the use of predictive formulae based on such economic data as population, retail sales, motor vehicle registrations, postal receipts, etc. See Francis G. Cornell, *A Measure of Taxpaying Ability of Local School Administrative Units* (1936), pp. 85 ff. Although the study was made on the basis of county ability indices, it is suggested that similar techniques could be applied to local school districts large enough to be efficient. *Ibid.*, p. 90. On this point, however, *cf.* Paul R. Mort and W. C. Reusser, *Public School Finance* (1941), p. 430.

[18]In 1940 there were 118 unit districts and 623 high school districts; *Property Tax Assessments, Levies, Rates, and Extensions: 1940* (Illinois Tax Commission), p. 5. In Wisconsin the appraisal work for the entire state is handled by a field staff of four district supervisors, eight deputies, and eight stenographers. Letter from Forrest W. Gillett, *supra.*

school taxation and another for purposes of taxation by other governmental units. This objection, however, would seem to be no more valid with respect to school taxes than it was with respect to the state property tax when it was levied on a valuation different from the one used for taxation by other local governmental units.

Summary

The problem of securing through state aid tax rate differentials favorable to consolidation is more difficult in the rural areas than in urban areas because tax rates are typically lower in the rural areas. One reason for this, but not the only reason, is that assessment ratios are, typically, higher in rural areas. Apportioning the tax levies of new large school districts between urban and rural areas more nearly on the basis of their respective full values than on the basis of their present assessed values would, in typical situations, necessitate less state aid to secure tax rate differentials favorable to consolidation. More money would be raised in the urban areas than if assessed values were used, and therefore less money would need to be raised in the rural areas. Hence, such a procedure would meet the argument based on equity that inclusion of urban and rural property in the same school district forces the rural people to bear more than their fair share of the school tax burden. The extent to which this procedure would lighten the rural tax burden will vary directly with the extent to which the rural and urban assessment ratios differ and with the proportion of the district's assessed valuation which is contained in the urban area. Such apportionment of tax levies between urban and rural areas might be carried out either by improving the original assessment or by equalization. While the former is the more desirable from the standpoint of equity, for reasons of expediency the latter may be the best solution which can be obtained within the foreseeable immediate future. If this is true, equalization by the Tax Commission would seem to be more feasible than by county boards of review, because of the difficulty in forcing such bodies to do what they have ample power to accomplish now but which they do not do. While the administrative problem of determining separate urban and rural assessment ratios for school districts in general conforming to the present four-year high school areas would demand appraisal techniques not yet used in this state for the determining of assessment ratios, the problem would not seem to be insurmountable, in the light of the experience of the New York and Wisconsin commissions, especially if the number of such districts were not large during the first few years of the program.

Chapter VIII

CONCLUSIONS

The Illinois system of school organization is a very decentralized one. Compared with many other states, Illinois has been a laggard in reducing the number of school units and the number of small rural schools, despite the fact that the amount of surfaced road mileage has increased markedly during the last decade.

In the light of the successful attacks on proposed legislation to give a state agency power to reorganize local school units, it seems reasonable to assume that, so far as the foreseeable future is concerned, reorganization by *fiat* of a state agency is not within the bounds of the politically feasible. If this is true, school reorganization must be promoted by other methods, such as leadership designed to convince localities that consolidation is desirable; propaganda and adult education regarding the advantages of consolidation; and the encouragement of the formation of larger school units by establishing economic inducements by granting them more liberal aid than the less adequate units. This study is devoted to the latter problem, and is an investigation of the means by which and the extent to which state aid policies can be used in Illinois to further consolidation of school units—both attendance areas and political units of school support and administration. It is thus largely restricted to the economic factors which motivate people to form larger school units or to keep the traditional organization. These economic factors are but a part of the complex of factors which so motivate people. There is disagreement as to how large a part of the total situation the economic factors are. It is argued that the economic is *one* of the important factors influencing the attitudes of local people toward consolidation. It can be argued that merely providing an economic incentive for consolidation, in the form of local tax rate differentials, will be relatively ineffective until education and propaganda have convinced local people, and especially rural people, that larger school units are desirable for their own sake. In answer to this, however, it is argued that, if economic incentives are established, the problem of education and propaganda will be simplified, since there will be an added argument for consolidation; and that local action for consolidation is more likely to come about if there is education plus an economic incentive than if exclusive reliance is placed on hortatory efforts of officials and civic organizations.

Grants-in-aid in general may be thought of as having three purposes: equalization; serving as an instrument of central administrative control; and serving as a reward for local effort in order to stimulate action in a

given direction. State aid policies intended to induce consolidation might be conceived as coming within either of the latter two categories. For instance, if grants were made conditional upon a district's having a certain area and enrollment, the grants could be regarded as primarily instruments of central control. If grants were extended more generously to large districts than to small districts, they could be conceived as grants intended to stimulate action in a given direction by rewarding local action. Stimulation grants have the disadvantage of being to some extent incompatible with the equalization philosophy, since they may result in state aid going to areas in reward for certain action which might have been taken anyway, partially because the given area is a relatively able one. Allocation formulae in which the teacher basis predominates may be expected to intrench rural schools more than formulae in which the pupil basis predominates, because of the low pupil-teacher ratios in rural areas.

Within the last three decades state aid to schools in Illinois has increased from $1,000,000 to over $16,000,000 per year. Despite this increase, over nine-tenths of the cost of elementary and secondary education is borne locally. The allocation formulae in the Illinois state aid laws first emphasized the number of educables, then reward for effort, and finally (since 1927-28) equalization. Despite the recent emphasis on equalization, in 1939 two-thirds of the state aid distributed to elementary and secondary schools was distributed on the basis of flat grants per elementary attendance pupils, and before that the proportion was even higher. Within the past decade there has been increasing attention devoted to the problem of distributing state aid in ways which would minimize any possible tendency for it to perpetuate the existing system or in ways which would positively encourage school consolidation. Examples of this trend are: the reiterated attitude of the Horner administration that reorganization should precede increases in state aid in order not to perpetuate the small district system; the passage of a transportation aid statute; repeal of the 18-pupil "pegging" clause regarding the general apportionment; passage of a statute denying aid to schools of less than seven attendance pupils where transportation is feasible; and a proposal by the Department of Finance that formation of new large twelve-grade districts be encouraged by granting aid to them on liberal terms.

Evaluation of the more recent legislation enacted as a result of this trend in the thinking of the educational leadership of the state must be tentative, since the data available at the date of writing (1941-42) were in some instances only estimates, and in other instances they were for a period of time before the full effect of the legislation would be felt. With these qualifications in mind, it is concluded that transportation aid during the first year of its operation had only a very limited effect so far

as closing rural schools and thus enlarging attendance areas was concerned, since only approximately three per cent of the pupils for which transportation aid was claimed were in no-teacher districts. Approximately 95 per cent of the pupils for which transportation aid was claimed were high school pupils or were in elementary systems with three or more teachers. An impetus in the transportation of rural elementary pupils is expected, however, as a result of 1941 legislation permitting districts to contract for the transportation of their pupils. As yet transportation aid has probably had a negligible effect upon the consolidation of political units, but it constitutes a potential encouragement to such consolidation in that it will lead rural people to think in terms of a larger school community and will tend to meet possible arguments against consolidation, such as the problem of transportation costs and, perhaps, the disparity between rural and urban assessment ratios. In one way transportation aid may operate to make consolidation of political units, as distinguished from attendance areas, more difficult, to the extent that closing rural schools permits such districts to become low tax areas which may be expected to have a vested interest in the existing system. The more of these districts there are, the more difficult and costly to the state will be the problem of providing local tax rate differentials favorable to consolidation.

The elimination of the 18-pupil "pegging" provision for calculation of the general apportionments has resulted in a larger proportion of the state aid being distributed as equalization quotas and less as general apportionment. It has been argued that removal of this clause from the statute would minimize the tendency of state aid to intrench the small enrollment district. It is doubtful, however, if removal of this clause has changed local sentiment regarding consolidation to any appreciable extent, since usually only a small local tax increase will be necessary to replace it. The $1,048 per-teacher minimum for equalization aid has, in effect, retained the 18-pupil "pegging" provision for districts that find the $1,048 goal more advantageous than the per-pupil goal. The significance of the per-teacher minimum changes as the per-pupil equalization goal is increased, since increasing the per-pupil goal results in smaller schools finding it advantageous to use the number of pupils. From this it may be argued that increasing the per-pupil goal does not give more aid to the small attendance schools which find the per-teacher goal more advantageous, but would help the needier elementary schools where the number of pupils per teacher is reasonable. So far as the effect of the per-teacher minimum is concerned this is true, but it is also true that, as the per-pupil goal is raised, smaller and smaller schools are subsidized more generously by the state than when they were using the per-teacher goal. Study of the various areas of the state with respect to the extent to which their school budgets are subsidized by the state reveals that withdrawing

the present aid as a sanction for reorganization proposals would be of limited effect in large areas, since such a loss could be replaced by relatively small increases in local tax rates. Such areas contain a relatively large proportion of the rural pupils. In areas where withholding aid would be more effective it would not be as easy to justify as in the more able areas, since there is some tendency for counties relying heavily on state aid also to be counties where road conditions are less favorable to consolidation.

The chief effect of withholding aid from rural schools with less than seven attendance pupils will probably be a saving to the state (so far as such schools are concerned) and the freeing of funds for distribution as equalization aid. The reason is that many such schools are expected to continue to operate, because the loss in state aid can in many cases be compensated by a small increase in the local tax rate, since it appears that such districts, as a whole, tend to be relatively able districts. To the extent that such districts close their schools and become low tax areas there is a danger that they will have a vested interest in the existing system. The experience of other states indicates that this can be one effect of closing rural schools without also merging political units, although the experience of New York indicates that the problem will be minimized if the low tax areas are scattered, are not too numerous, and if liberal aid is given to large units.

There is a possibility, in some areas at least, that consolidation of attendance areas would necessitate construction of new buildings to an extent that would offset economies resulting from consolidation. In order that this possibility might not discourage local communities from consolidating attendance areas, it is proposed that the state assist in the program of new construction made necessary by consolidation. Such aid would be conditioned on units being of reasonable size. The proposed grant would follow the equalization pattern, in which the state would provide the difference between a uniform local contribution and a guaranteed unit cost. What would be a reasonable unit cost will depend on conditions which exist at a particular time and on what assumptions are adopted with respect to certain issues. The following are suggested as reasonable standards for the state to adopt as a basis for its guarantee: $10,000 per classroom unit, or $350 per enrollment pupil, assuming 1939-40 cost conditions, without provision for gymnasiums or other special units; a pupil-teacher ratio of thirty to one; and cost conditions at the average for the state. If gymnasiums and other special units were to be guaranteed, a cost of $15,000 per classroom would be reasonable.

In determining what would be a reasonable local qualifying contribution for building aid, it is assumed that such contribution should be stated in terms of full value, that most districts would have to issue bonds, that

a qualifying local contribution should not be set so high that a substantial part of the state would be unable to qualify, and that considerable variation in assessment ratios will persist during the foreseeable future. On the basis of these assumptions the upper limit for the local contribution should be 2 per cent of full value, since to require more than that would result in many areas being unable to qualify because of restricted bonding capacity. Restricted bonding capacity is caused by low assessment ratios and existing indebtedness. It would be desirable that a reasonable amount of existing debt be deducted from the amount which the locality would be required to contribute, but there is a possibility that this arrangement could not be defended in the courts. If such a provision were invalidated, and if a new district were forced to assume the indebtedness of existing districts with which it is coterminous, or substantially so, the qualifying local contribution would have to be less than 2 per cent of full value—perhaps .75 of one per cent or even lower—in order that areas with low assessment ratios or high ratios of indebtedness to assessed valuation would not be excluded from qualifying for aid as a result of the required qualifying contribution being higher than the amount which they can borrow.

The cost of a building aid program which would centralize rural enrollments in schools with three or more teachers is estimated at $60,000,000, assuming a per-pupil cost of $400. Abandoning no schools with three or more teachers would result in some relatively inefficient attendance areas, but the estimates have been based on such an assumption because of a desire not to assume attendance areas so large that it will be difficult to get rural public opinion to accept them within the not too distant future. Under 1939-40 conditions, $100,000,000 may be estimated to represent the maximum cost of centralizing elementary enrollments, since this would make possible rehousing, at $400 per pupil, all elementary pupils in rural schools and in urban centers under 1,000; it is unlikely that reorganization plans will need to be so drastic in order to provide relatively efficient units.

The State Department of Finance has proposed that formation of large twelve-grade districts meeting minimum area and enrollment requirements be encouraged by granting aid to them on more liberal terms than to present districts. In this proposal it is suggested that the new large districts be guaranteed the same equalization goals as the present districts, but that the new districts be allowed to qualify on the basis of a rate, expressed in terms of full value, which is lower than that which obtains typically in areas claiming equalization aid under the present law. The proposal contained no provision for building aid. Evaluation of this proposal must be made by intensive case studies of hypothetical larger

districts. Three such hypothetical districts were studied. The number of cases is not large enough to permit inferences as to what are typical situations throughout the state, but they do serve to clarify certain issues and to suggest problems worthy of further study. The case studies indicate that the effect of changing the expenditure level in the new large district may be more important than the amount of state aid received, and similar studies throughout the entire state may show that the qualifying rate for equalization aid should be lower than that proposed by the Department (0.4 per cent of full value) and that building aid should be made available in order to establish tax rate differentials favorable to consolidation throughout a substantial portion of the state. Study of the test areas shows that the tax rate to amortize the cost of new buildings will not be very great where a large part of the new district's enrollment is already educated in an urban center where there exists some unused building capacity. There would be a tendency for such a tax rate to be higher where a relatively small urban community would serve as an attendance center for the new large district, since the ratio of the enrollment to be housed to the resources of the district would be higher. The case studies also reveal that the problem of securing favorable tax rate differentials for a majority of the people in the rural area makes necessary, in typical situations where the urban district's tax rate is the highest in the area, a more expensive combination of state aids than would be the case if a vote were taken in which the urban electorate could override the rural electorate. "Undercutting" the tax rates of a majority of the rural people is more difficult and expensive than merely "undercutting" the tax rates of a majority of the people of the entire district. The effectiveness of a given amount of state aid in inducing consolidation will therefore depend to some extent upon the manner in which the vote is taken.

One reason for the fact that existing tax rates are typically lower in rural areas, but not the only reason, is that assessment ratios are generally higher in rural areas. If the tax levies of the new large districts could be apportioned on the basis of their respective full values rather than on the basis of their present assessed values, rural tax rate differentials favorable to consolidation could be effected, since more money would be raised in the urban area than if assessed values were used, and therefore the tax rate of rural areas would be lower. Hence, such a procedure would meet the argument based on equity that inclusion of urban and rural property in the same school district forces the rural people to bear more than their fair share of the tax burden. The extent to which the revised assessments would lighten the rural tax burden will vary directly with the amount of disparity between the rural and urban assessment

ratios and with the proportion of the large district's assessed valuation which is contained in the urban area. Such apportionment of tax levies between urban and rural areas might be effected in either of two ways: by improving the original assessment or by equalization. Although the former is more desirable from the standpoint of equity, the latter may be the most nearly practicable within the foreseeable future, in which case equalization by the Tax Commission seems to be more feasible than equalization by boards of review, because it would probably be difficult to induce these bodies to exercise the power which they now have but do not use. While the administrative problem of determining separate urban and rural assessment ratios for school districts conforming in general to the present four-year high school areas would demand appraisal techniques not yet used in this state, the experience of the New York and Wisconsin tax commissions indicates that the problem is not insurmountable, especially if the number of such districts were not large during the first few years of the program.

BIBLIOGRAPHY

I. FEDERAL PUBLICATIONS

Federal Works Agency (PWA)

Allotments for Educational Building Construction, 1939.

Bureau of the Census

Illinois — Composition and Characteristics of the Population, Population Bulletin, 2nd ser., 1930.
Number of Inhabitants — Illinois, Population Bulletin, 1st ser., 1941.

Office of Education

Are the One-Teacher Schools Passing? Pamphlet No. 92, 1940.
Consolidation of Schools and Transportation of Pupils, 1927-1928, Circular No. 3, 1930.
Consolidation of Schools and Transportation of Pupils, 1931-1932, Circular No. 132, 1934.
Financial Implications of the Consolidation of Schools and the Transportation of Pupils, Circular No. 117, 1934.
Local School Unit Organization in 10 States, Bulletin No. 10, 1938.
Principles and Procedures in the Organization of Satisfactory Local School Units, Bulletin No. 11, 1938.
"Some Consolidation Statistics," *School Life*, April, 1936.
School Administrative Units with Reference to the County Unit, Pamphlet No. 34, 1933.
State Aid for School Consolidation and Pupil Transportation, Leaflet No. 3, 1931.

II. STATE PUBLICATIONS

Illinois

The A-B-C of Illinois State Finance, Department of Finance, Springfield, 1940.
Atlas of Taxing Units, Illinois Tax Commission, Chicago, 1939.
Biennial Report of the Auditor of Public Accounts, 1925-41.
Bonded Indebtedness of Local Governments, 1927-40, Illinois Tax Commission, Chicago.
First Report of Governor Dwight H. Green's Advisory Committee on Taxation, Mimeographed, Governor's Office, Springfield, 1941.
Health and Physical Education Syllabus, Circular No. 301, Office of State Superintendent of Public Instruction, Springfield, undated.
The Illinois Revenue System, 1818-1936, Illinois Tax Commission, Chicago, 1936.
Illinois School Directory, 1940-1941, Office of State Superintendent of Public Instruction, Springfield.
Illinois School Report, 1935 to 1938, Office of State Superintendent of Public Instruction, Springfield.
Illinois Tax Problems, Illinois Tax Commission, Chicago, 1939.
Legislative Synopsis and Digest, 1930-41, Legislative Reference Bureau, Springfield.
A Manual for the County School Survey Committee, Mimeographed, Office of State Superintendent of Public Instruction, Springfield, 1941.
Opinion of the Attorney General, September 9, 1941.
Proceedings of Meeting of Governor's Tax Conference, . . . March 6, 1941, Governor's Office, Springfield.
Property Tax Assessments, Levies, Rates, and Extensions: 1939, Illinois Tax Commission, Chicago.

Property Taxation: Assessed Valuations, Levies, Tax Rates, and Tax Extensions, 1937 and 1938, Illinois Tax Commission, Chicago.

Report of the Advisory Staff Made to the Illinois Education Commission, Springfield, 1936.

Report of the Illinois Educational Commission, Springfield, 1936.

A Report on Educational Problems in Illinois, Speech delivered by Governor Henry Horner to the Illinois Education Association and the Illinois County Superintendent's Association, Springfield, undated.

School Law of Illinois, 1939, Circular No. 308, Office of State Superintendent of Public Instruction, Springfield.

School Law of Illinois, 1941 Supplement, Office of State Superintendent of Public Instruction, Springfield.

Some Aspects of School Administration in Cook County, Mimeographed, Research Department, Illinois Legislative Council, Springfield, 1940.

Some Aspects of School Administration in Illinois, Mimeographed, Research Department, Illinois Legislative Council, Springfield, 1938.

State Aid to Schools in Illinois, Department of Finance, Springfield, 1939.

The State School Fund and Its Interpretation, Circular No. 286, Office of State Superintendent of Public Instruction, Springfield, 1939.

Statistical Report of the Superintendent of Public Instruction, 1925-40, Office of State Superintendent of Public Instruction, Springfield.

Study of Local School Units in Illinois, Office of State Superintendent of Public Instruction, Springfield, undated.

Tax-Rate Limits and Assessment Ratios, 1925-1940, Illinois Tax Commission, Chicago.

MISSOURI

Report of the Public Schools, 1920-39, State Superintendent of Public Schools, Jefferson City.

NEW YORK

Annual Report of the State Education Department, Vol. II, 1930-38, State Education Department, Albany.

First Report of the Joint Legislative Committee to Investigate Procedures and Methods of Allocating State Moneys for Public School Purposes and Subversive Activities, Legislative Document (1941), No. 54, Albany.

The Method of Apportionment of State Aid for Schools in New York, Mimeographed, State Education Department, Albany, 1940.

Report of the Special Joint Committee on Taxation and Retrenchment, Legislative Document (1925), No. 07, Albany.

State Support for Public Schools in New York as Related to Tax Relief and Educational Expansion. A Report to the New York State Commission for the Revision of the Tax Laws by Paul R. Mort, Alfred D. Simpson, Eugene S. Lawler, and Don L. Essex. Albany, 1932.

OHIO

Annual Report of the Director of Education, 1915-30, Director of Education, Columbus.

III. UNPUBLISHED STATE AND COUNTY RECORDS

Annual Reports of the County Superintendent of Schools, 1939-40, Office of State Superintendent of Public Instruction, Springfield.

Elementary School Annual Report and Rating Scale, Office of State Superintendent of Public Instruction, Springfield.

State Aid Claims, 1938-40, Office of State Superintendent of Public Instruction, Springfield.

Transportation Aid Claims, 1940, Office of State Superintendent of Public Instruction, Springfield.

Trustees' Annual Report, 1940, Office of County Superintendent of Schools, Champaign, Pike, and Sangamon Counties.

IV. BOOKS AND SPECIAL STUDIES

ANDERSON, WILLIAM, *The Units of Government in the United States,* Public Administration Service, Chicago, 1936.

BITTERMANN, HENRY J., *State and Federal Grants-in-Aid,* Mentzer, Bush, and Co., Chicago, 1938.

COOK, WILLIAM A., *Federal and State School Administration,* Thomas Y. Crowell Company, New York, 1927.

CORNELL, FRANCIS G., *A Measure of Taxpaying Ability of Local School Administrative Units,* Bureau of Publications, Teachers College, Columbia University, New York, 1936.

CUBBERLY, ELWOOD P., *Public School Administration,* Houghton-Mifflin Co., Cambridge, Mass., 1916.

————, "Apportionment of School Funds," in Paul Monroe, editor, *Cyclopedia of Education,* The Macmillan Co., New York, 1911.

DAWSON, HOWARD A., *Satisfactory Local School Units,* Division of Surveys and Field Studies, George Peabody College for Teachers, Nashville, Tennessee, 1934.

Education for American Life, Report of the Regents' Inquiry into the Character and Cost of Public Education in the State of New York, McGraw-Hill Book Company, New York, 1938.

ENGELHARDT, N. L., and ENGELHARDT, FRED, *Planning School Building Programs,* Bureau of Publications, Teachers College, Columbia University, New York, 1930.

————, *Public School Business Administration,* Bureau of Publications, Teachers College, Columbia University, New York, 1927.

ENGELHARDT, N. L., JR., *School Building Costs,* Haddon Craftsmen, Inc., Camden, N. J., 1939.

————, "School Building Costs," *The American School and University,* Twelfth Edition, 1940.

EULER, H. L., *County Unification in Kansas,* Bureau of Publications, Teachers College, Columbia University, New York, 1935.

FINER, HERMAN, *English Local Government,* Methuen and Co., Ltd., London, 1933.

GRACE, A. G., and MOE, G. A., *State Aid and School Costs,* McGraw-Hill Book Company, New York, 1938.

GRIMM, L. R., "Financial Requirements of Education in Illinois," in *Illinois Tax Problems,* Illinois Tax Commission, Chicago, 1939.

————, *Building the State Common School Fund in Illinois,* Illinois Education Association, Springfield, 1940.

————, *The Illinois Plan of State Aid for Common Schools,* Illinois State Teachers' Association, Springfield, 1934.

————, *The Minor State Common School Aids in Illinois,* Illinois Education Association, Springfield, 1940.

————, *State Aid for Common Schools,* Illinois State Teachers' Association, Springfield, 1936.

————, *State Aid Issues in Illinois,* Illinois Education Association, Springfield, 1940.

————, *When the Old Order Changeth,* Illinois Education Study Unit No. 4, January, 1939, Illinois Education Association, Springfield, 1939.

HALL, EARL R., *Administrative Unit for Illinois,* Bureau of Publications, Teachers College, Columbia University, New York, 1939.

HUNTER, M. H., and ALLEN, H. K., *Principles of Public Finance,* Harper and Brothers, New York, 1940.

Illinois Agricultural Association, "Distribution, by Counties, of One-Room School Districts Filing State Aid Claims in 1940, Showing Number and Per Cent of Districts with Average Attendance of Less than Seven Pupils," Mimeographed release, No. 232, January, 1941, Chicago.

————, "Memorandum Regarding Estimated School Building Costs under Federal Grant Projects, 1933-39" (Typewritten), September 22, 1941, Chicago.

————, "Memorandum Regarding Proposed Legislation Altering State Aid Provisions for School Districts Having Less Than Seven Pupils in Attendance," Mimeographed release, No. 687-a, January, 1941, Chicago.

Illinois Education Association, *The Common School Bills,* Mimeographed release, 1941, Springfield.

Jones, Stuart H., "Budget Plan for Checking Income and Costs That May Be Incurred in the Planning of a Single School Building," in G. M. Whipple, editor, *The Planning and Construction of School Buildings,* Thirty-third Yearbook of the National Society for the Study of Education, Pt. I (1934), Public School Publishing Co., Bloomington, Illinois.

Labovitz, I. M., "Education," in S. E. Leland, editor, *State-Local Fiscal Relations in Illinois,* University of Chicago Press, Chicago, 1941.

Lancaster, Lane W., *Government in Rural America,* D. Van Nostrand Company, New York, 1937.

Lawler, Eugene S., "Technical Aspects of the Development of the National Pupil-Teacher Index," Supplement III in Paul R. Mort, *State Support for Public Education,* American Council on Education, Washington, D. C., 1933.

Leland, Simeon E., *Fiscal Problems of Education in Illinois,* Speech published by Du Page Valley Division, Illinois State Teachers' Association, 1935.

————, "Some Observations on Intergovernmental Fiscal Relationships," in S. E. Leland, editor, *State-Local Fiscal Relations in Illinois,* University of Chicago Press, Chicago, 1941.

————, editor, *State-Local Fiscal Relations in Illinois,* University of Chicago Press, Chicago, 1941.

Mackenzie, D. H., *Mathematics of Finance,* McGraw-Hill Book Company, New York, 1937.

Mills, Frederick C., *Statistical Methods,* Henry Holt and Co., New York, 1924.

Moehlman, Arthur B., "Theory of School Plant Costs," in G. M. Whipple, editor, *The Planning and Construction of School Buildings,* Thirty-third Yearbook of the National Society for the Study of Education, Pt. I (1934), Public School Publishing Co., Bloomington, Illinois.

Morphet, Edgar L., *The Measurement and Interpretation of School Building Utilization,* Bureau of Publications, Teachers College, Columbia University, New York, 1927.

Morrison, Henry C., *School Revenue,* University of Chicago Press, Chicago, 1930.

Mort, Paul R., *The Measurement of Educational Need,* Bureau of Publications, Teachers College, Columbia University, New York, 1924.

————, *State Support for Public Education,* American Council on Education, Washington, D. C., 1933.

————, *State Support for Public Schools,* Bureau of Publications, Teachers College, Columbia University, New York City, 1926.

Mort, Paul R., and Cornell, Francis G., *American Schools in Transition,* Bureau of Publications, Teachers College, Columbia University, New York, 1941.

Mort, Paul R., and Reusser, W. C., *Public School Finance,* McGraw-Hill Book Company, New York, 1941.

National Education Association, Research Division, *Advantages of Consolidation,* Typewritten Memorandum, Washington, D. C., 1937.

————, *Population Trends and Their Educational Implications,* Research Bulletin, Vol. XVI, No. 1, January, 1938.

————, *Progress in Rural Education,* Research Bulletin, Vol. XVIII, No. 4, September, 1940.

———, *References on County Administration of Schools,* Washington, D. C., 1938.
———, *References to Standards and Recommendations for School Buildings and Equipment,* Washington, D. C., 1940.
———, *School Costs and State Expenditures, 1930-1939,* Research Bulletin, Vol. XIX, No. 3, May, 1941.
———, *School Finance Systems,* Washington, D. C., 1938.
———, *State Comparisons of School Support,* Washington, D. C., 1941.
NEULEN, LESTER N., *State Aid for Educational Projects in the Public Schools,* Bureau of Publications, Teachers College, Columbia University, New York, 1928.
PEARSON, IRVING F., *The Organization of School Districts,* Illinois Education Association Study Unit No. 3, December, 1940.
PERRIN, HARRY A., *The Administration of the State Distributive Fund in Illinois,* University of Chicago Libraries, Chicago, 1932.
PFIFFNER, JOHN M., *Public Administration,* Ronald Press Co., New York, 1935.
Report on School District Reorganization Proposals, Typewritten Memorandum, October, 1941, State Committee for the Reorganization of School Districts, Olympia, Washington.
Report of the Governor's Committee on the Costs of Public Education in the State of New York, 1933, New York City.
STAUFFER, WILLIAM H., "State Aid Goals," in *Tax Relations Among Governmental Units,* Tax Policy League, Inc., New York, 1938.
STRAYER, GEORGE D., JR., *Centralizing Tendencies in the Administration of Public Education,* Bureau of Publications, Teachers College, Columbia University, New York, 1934.
STRAYER, GEORGE D., and ENGELHARDT, N. L., *Standards for Elementary School Buildings,* Bureau of Publications, Teachers College, Columbia University, New York, 1933.
SWIFT, FLETCHER H., *A History of Public Permanent Common School Funds in the United States,* Henry Holt and Co., New York, 1911.
———, *Federal and State Policies in Public School Finance,* Ginn and Co., New York, 1931.
UPDEGRAFF, HARLAN, *Rural School Survey of New York State,* Published by the Author, Ithaca, New York, 1922.
WALKER, HARVEY, *Public Administration,* Farrar and Rinehart, New York, 1937.
WEBER, OSCAR F., *The Problem of School Organization and Finance in Illinois,* University of Illinois Bulletin, Vol. XXXVI, No. 15, 1938.
WELLER, GERALD M., *State Equalization of Capital Outlay for Public School Buildings,* Unpublished doctor's dissertation, University of Southern California, Los Angeles, 1935.
WHITE, L. D., *Introduction to the Study of Public Administration,* Macmillan Company, New York, 1939.
WOMRATH, GEORGE F., *Efficient Business Administration of Public Schools,* Bruce Publishing Co., New York, 1932.

V. JOURNALS

BURKE, ARVID J., "State Aid for Reorganization," 19 *The Nation's Schools* (April, 1937), p. 36.
COBERLY, E. L., "Transportation Reimbursement Paid," 29 *Illinois Teacher* (November, 1940), p. 76.
"Construction Costs," 124 *Engineering News-Record,* Part II (April-June, 1940), p. 87.
"Determining the Purpose of a State Distributive Fund," 15 *Illinois Teacher* (January, 1927), p. 79.

"Distributive Fund Not Deducted," 21 *Illinois Teacher* (February, 1933), p. 165.
"Editorial," 27 *Illinois Teacher* (February, 1939), p. 163.
"Editorial," 21 *Illinois Teacher* (February, 1933), p. 165.
"Equalizing Educational Opportunities: the Primary Purpose of the State School Fund," 15 *Illinois Teacher* (September, 1926), p. 4.
"Equalizing to Higher Levels," 19 *Illinois Teacher* (November, 1930), p. 85.
GRIFFITH, B. I., "Illinois Small School Problem," 29 *Illinois Education* (October, 1940), p. 37.
GRIMM, L. R., "New Plan of State Aid Proposed," 23 *Illinois Teacher* (May, 1935), p. 287.
————, "The Special Legislative Sessions," 27 *Illinois Teacher* (September, 1938), p. 13.
"The Illinois Constitutional Requirement of Uniformity in Taxation," 33 *Illinois Law Review* (May, 1938), p. 65.
"Illinois Schools Hit by Steady Decline in Enrollment," 19 *Illinois Agricultural Association Record* (March, 1941), p. 27.
LEE, CHARLES A., "Suggested School District Reorganization Program for the State of Missouri," 26 *School and Community* (January, 1940), p. 37.
MATHIAS, PAUL, "What's Going on at Springfield," 15 *Illinois Agricultural Association Record* (June, 1937), p. 31.
MOORE, R. C., "Veto Message Erroneous but Revealing," 25 *Illinois Teacher* (June, 1937), p. 326.
"The New Plan of State Fund Apportionment," 17 *Illinois Teacher* (January, 1929), p. 132.
"A Proposed New Plan of State Aid Apportionment," 15 *Illinois Teacher* (May, 1927), p. 184.
"Resolutions," 16 *Illinois Agricultural Association Record* (February, 1939), p. 16.
RUGGLES, CATHERINE G., "State Aid and Shared Taxes in Illinois," 35 *Illinois Law Review* (February, 1941), p. 754.
SHAFER, B. F., "Our State Support Program," 27 *Illinois Teacher* (March, 1939), p. 199.
————, "What About Legislation," 27 *Illinois Teacher* (February, 1939), p. 162.
"Special Sessions of the Sixtieth General Assembly," 16 *Illinois Agricultural Association Record* (August, 1938), p. 19.
"State Aid Apportionments to Large City School Districts," 14 *Illinois Teacher* (April, 1926), p. 145.
"State Aid Claims by Various Types of Districts," 14 *Illinois Teacher* (May, 1926), p. 164.
"The State Sales Tax," 11 *Illinois Agricultural Association Record* (April, 1933), p. 5.
WELLER, GERALD M., "A Plan for State Equalization of Capital Outlays for Public School Buildings," 91 *American School Board Journal* No. 2 (August, 1935), p. 23.

VI. CORRESPONDENCE

BARKER, F. N., Engineer of Highway Research, Division of Highways, Springfield, Illinois (Nov. 3 and Nov. 7, 1941).
BURKE, A. J., Director of Studies, New York State Teachers' Association (May 27, 1941).
CALLAHAN, JOHN, State Superintendent of Public Instruction, Madison, Wisconsin (Oct. 31, 1941).
ENGELHARDT, N. L., Professor of Education, Teachers College, Columbia University, New York City (Sept. 23, 1941).
ENGELHARDT, N. L., JR., Acting Director of Research, Board of Education, Newark, N. J. (Sept. 24, 1941).

FEATHERSTONE, GLENN, Director of Research, Department of Public Schools, Jefferson City, Mo. (June 14 and Oct. 8, 1941).
FLOYD, G. E., Department of Education, Little Rock, Arkansas (Oct. 6, 1941).
FRISIWOLD, I. O., Department of Education, St. Paul, Minn. (Oct. 8, 1941).
GREGORY, MARSHALL, Director, Division of Research, Office of State Superintendent of Public Instruction, Oklahoma City, Okla. (Oct. 20, 1941).
HALL, JULIUS R., Assistant Regional Director, Public Works Administration, Chicago, Ill. (July 31, 1941).
HERBST, R. L., Director of Research, State Department of Public Instruction, Dover, Del. (Oct. 4, 1941).
JOHNS, R. L., Department of Education, Montgomery, Ala. (Aug. 18, 1941).
MANVEL, ALLEN, Director of Research, Illinois Agricultural Association (June 14, June 19, and Oct. 21, 1941).
MORT, PAUL R., Professor of Education, Teachers College, Columbia University, New York City (Aug. 14, 1941).
ROBINSON, R. W., Department of Public Instruction, Harrisburg, Pa. (Oct. 17, 1941).
SCHMIDT, A. W., Assistant Commissioner for Finance, State Education Department, Albany, N. Y. (Dec. 13, 1941).
SOPER, WAYNE W., State Education Department, Albany, N. Y. (Oct. 31, 1941).
SPRATT, DANIEL R., Department of Taxation, Albany, N. Y. (Oct. 3, 1941).
TANNER, MYRTLE L., Director, Division of Information and Statistics, Department of Education, Austin, Texas (Oct. 31, 1941).
TAYLOR, C. L., Department of Public Instruction, Lansing, Mich. (Nov. 4, 1941).
VINSON, C. C., Statistician, Department of Education, Topeka, Kansas (Nov. 4, 1941).

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